EFFECTIVENESS OF THE TACTILE STIMULATION ON ANXIETY AND SELECTED PHYSIOLOGICAL PARAMETER (HR) AMONG PATIENTS ADMITTED IN INTENSIVE CARE UNITS (ICU_S)

A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL 2014

CERTIFICATE

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ABSTRACT

The research project is a "Quasi experimental study to evaluate the effectiveness of tactile stimulation on anxiety and selected physiological parameter (HR) among patient admitted in Intensive Care Units (ICUs) of Government Rajaji Hospital at Madurai". Pre test post test non equivalent control group research design was adopted. The total sample size was 60 out of which 30 samples were in the experimental group and 30 samples were in the control group. This study was carried out by administration of tactile stimulation twice a day for 3 days continuously, and by checking Apical heart rate per minute with the help of stethoscope. The tool used to assess the level of anxiety was modified anxiety part of CINT questionnaire in which 15 items were related in a four point likert type scale. The data obtained were analyzed by inferential and descriptive statistics. The major findings of the study were the mean post level of anxiety of patients admitted in ICU who received tactile stimulation was ($t=19.328$, $P<0.05$) lower than their mean pre test level of anxiety. The mean post level of selected physiological parameter (HR) of patients admitted in ICU who received tactile stimulation was ($t=9.483$, $P<0.05$) lower than their mean pre test level of selected physiological parameter (HR). There was a significant positive relation between the post level of anxiety ($r=1$) and selected physiological parameter (HR) ($r=0.215$) of experimental group who had received tactile stimulation. There was a significant association between the pre test level of anxiety with type of ICU [$\chi 2 = 5.59$ at df (2)] of experimental and control group. There was a significant association between the pre test level of heart rate with diagnosis of client [$\chi 2 = 5.59$ at df (1)] and type of ICU [$\chi 2 = 15.26$ at df (2)]. Based on the findings it is recommended that, tactile stimulation can be used for promoting healing environment and maintain the human element of nursing care in ICUs.

CHAPTER – I

INTRODUCTION

BACKGROUND OF THE STUDY

"There is no such thing as pure pleasure; some anxiety always goes with it"

- Ovid

The World Health Organization (WHO) takes a more holistic view of health. Its constitution defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948). This definition reflects concern for the individual as a total person functioning physically, psychologically, and socially.

Illness is a highly personal state in which the person's physical, emotional, intellectual, social, developmental or spiritual functioning is thought to be diminished. Illness behaviors includes assumption of the sick role during this stage and Emotional responses such as withdrawal, anxiety, fear and depression which are common depending on security of the illness, perceived degree of disability and anticipated duration of the illness. (Kozier & Eeb, 2011)

The concept of environmental influences on healing has been known since Florence Nightingale (1870) as a nursing leader cared for soldiers of the criman war. Intensive care unit plays a major role for the close monitoring of critically sick patients. It has high technology machines for better monitoring which require higher trained nurses (Hupcey, 2004).

The term "Critical Care Unit" invokes images of very ill patients surrounded by the latest in biomedical equipment, monitoring devices and code carts. These images

alone can raise feelings of anxiety and more stress in patients and families alike (Rabert Long and Autchinson 2008)

The appearance of special environment flashing light, buzzing machines, painful procedures, crowded and hyperactive environment induce stress on the patient. Bombardment with continuous high level stressors can be disturbing both physically and psychologically to a stressed critically sick patient. Information received through five senses evokes physiological and emotional responses of anxiety or serenity (Mazer, 2002).

In the critical care unit, where patient requires more frequent and more intensive monitoring, noise can be the most pervasive stressors (Petterson, 2000). Multiple authors have quoted that, patients have described their experience in receiving intensive care treatment in words such as 'frightening', 'frustrating', 'terrifying' feeling like 'being in prison' and "being alone". Patients also remember the environment as never being really quiet or peaceful (Lof et al, 2006, Mangus and Turkington, 2006).

Feelings of loneliness, fear of death, anxiety and insecurity about concrete matters such as the technical equipment and the different alarms are some of the experiences that dominate the patients' narratives. Recent research has confirmed that survivors of ICU treatment continue to experience both physical and psychological problems for some time after discharge from ICU. They reported prevalence of anxiety and depressive problems in ICU survivors ranges from 12% to 43% (for anxiety) and 10% to 30% (for depression) (Kahn, et al, 2009). Psychological manifestation of stress include anxiety, fear, anger, depression and unconscious ego defence mechanisms. A common reaction to stress is anxiety (Ashworth, 2003). Anxiety, pain and fear can all initiate or perpetuate the stress

response which if left untreated or under treated, anxiety can contribute to the morbidity and mortality of critically ill patients (Dorrie, Fontain, 2008).

Anxiety is a feeling of unease, such as worry or fear. Anxiety can have both psychological and physical symptoms. Anxiety releases stress hormones, such as adrenaline and cortisol. These causes the physical symptoms of anxiety, such as increased heart rate and increased sweating, headache, feeling faint, breathing faster, etc. (Barbara Christian, 2003).

Mild anxiety produces a slight arousal state that enhances perception, learning and productive abilities. Most healthy people experience mild anxiety, perhaps as a feeling of mild restlessness that prompts a person to seek information and ask questions. Moderate anxiety increases muscle tension, able to focus but selectively inattentive, slightly increased respiratory and heart rates, mild gastric symptoms (e.g. butterflies in the stomach) Tremors, facial twitches. Severe anxiety includes communication difficulty, inability to relax, fearful facial expression, inability to focus, tachycardia, headache, dizziness and nausea (Fontaine and Fletcher 2007).

Critical care staff can take measures to develop better ways to understand patient's experiences. Meeting such challenges can improve the quality of patient's experiences and reduce anxiety and may offset potential adverse effect of being a patient in an intensive care unit. (Stein Parbury, 2007). Critically ill patients are bombarded with treatment regimens within highly technical, sensory overloaded environment, and may find some relief from CAM that fit well within their cultural beliefs and has the potential to improve their wellbeing (Marie Cooke, 2009).

Role of Nurses in using Complementary and Alternative Medicine (CAM) at ICU:

- It is important that critical care nurses are able to offer beneficial, evidence based therapy of CAM.
- Critical care nurses create healing environments while providing holistic nursing care with CAM
- Critical care nurses should clarify the values and beliefs of the patient before providing CAM.
- Critical care nurses should develop the skill and be expertise on procedure.
- Critical care nurses should avoid them self to be hurried, distracted or fragmented. They should focus full attention on the activity.
- Critical care nurses should inquire about healing modalities the client may have used previously.

Complementary therapies concentrate on relaxation and reducing stress and may help to calm emotions, relieve anxiety and give a greater sense of confidence and boost to self-esteem. Complementary therapy works alongside conventional therapy to assist with improving symptom control and quality of life rather than on treating the disease (Kim Dolman, 2009).

Interventions in intensive care are often technical, such as administrating medications for anxiety, pain or sleep. Such 'ordered' and charted interventions remain expected and highly visible (Benner, 2004). They are beneficial for the patients but could also have side-effects such as hallucination and nightmares. It would be a great benefit to develop non-pharmacological alternatives in which patient's remain alert and able to

participate in nursing activities. Tactile touch is such non-pharmacological method, used successfully in other contexts (Henricson, Berglund and Maatta, 2008).

Tactile stimulation and therapeutic touch helps to alleviate some of suffering like anxiety. For example, in a research study even with heart patients, touch was shown to reduce anxiety when used prior to a hospital procedure (Krucof et al., 2004). Therapeutic touch as a complementary therapy has been used successfully in acute care settings to decrease anxiety and promote a sense of well-being (Patricia, 2009).

Considering the tactile stimulation as a safe and effective intervention on the patients, this technique can be used as simple cheap and applicable (Zahra Zare, 2004). It can be concluded that nurses have an important role in preparing patients emotionally and psychologically, through various methods including tactile stimulation.

NEED AND SIGNIFICANCE OF THE STUDY

"Touch Heals"

- John Milton

The Intensive Care Unit (ICU) is a potentially hostile environment for the vulnerable critically ill patient. Frequently reported stressful environmental factors are noise, ambient light, restriction of mobility, and social isolation. Usually one registered nurse and one or enrolled nurses are responsible for the care of two or four patients during the shift. The staff never leaves the patient alone (Berbom 2007, Wikstrom et al, 2007).

Equipment and procedures have developed tremendously during the past several decades and made the modern ICU and the hospitals as most technologically advanced environment (Szokol and Vender, 2007).

Anxiety, agitation, delirium and pain are common findings in the ICU. These unhealthy states may lead to increased irritability, discomfort, hypertension, tachycardia, cardiac ischemia, harmful motor activity and psychologic disquiet for the patient. The appropriate treatment of these conditions may lead to decreased morbidity and mortality in the critically ill patient (Garrido, Gonzalez, and Garcia, 2007).

Patients expressed wishes of physical contact, in addition to the contact the nurse had during treatment, like holding hand, getting a foot rub or receiving a cares. Patients want to participate in caring actions and be understood for their needs and wishes which requires communications between the one who gives and the one who receive care. (Karlsson and Forsberg, 2008).

Several studies have reported that patients who need intensive care unit (ICU) treatment may experience psychological distress with increasing development of psychological illness and morbidity related to psychological disorders. The presence of anxiety, depression and post traumatic stress disorder (PTSD) symptoms have been reported in three studies to have increased by 40%, 30% and 60% respectively, in ICU survivors (Adriano and Bonizzoli, 2011).

For critical care patients many alternative and complementary therapies including hydrotherapy, aromatherapy, massage, music and relaxation can be used successfully as adjunct therapies to help decrease stress and anxiety (Keegan, 2000).

Watkins, Grossman, Krishnan and Sherwood (2000) examined whether anxiety is associated with reduction in vagal control of heart rate. Anxiety was measured using the Spielberger state Trait Anxiety Inventory (STAI). These findings provided an evidence that trait anxiety is associated with reductions in vagal control of the heart rate.

Touch as therapy is one of the oldest forms of treatment in the world, first described in China during the second century (Field 2000). As a complementary method, touch has been used in ICUs to relieve the patients feeling of distress and promote comfort (Field et al, 2001).

Touch which is promoted in a wish to do well, could mean an existential confirmation and could be comforting, caring and protecting as well as provide feelings of trust, confidence and calmness (WigforssPecry, 2006). Touch experienced as comforting, stimulates the release of the calm and rest hormone Oxytocin and can give an anti-stress effect (Unvas-moberg, 2000).

In nursing care touch is an integral part and nurses frequently use touch to provide comfort and reach their patients (Benner, 2000 and Field, 2000). In intensive care, nurse use touch when caring for the patients, and a hug or a pat on the cheek is experienced by the patients as expression of human warmth and consideration (Wahlin, et al, 2006).

CAM has the potential to improve patient's physical and psychological well being including to promote sleep, rest, reduce anxiety and discomfort thus making the inclusion of CAM in care something to consider for an holistic approach to nursing in the ICU environment (Morion and Mitchell 2009). The concepts common to most alternative practices include holism, humanism, balance, spirituality, energy and healing environment (Kozier and Erb 2011).

High-tech-high touch approach in nursing care was devised to preserve the human component of nursing care without undermining the advantages of the technological advancements in the field of patient care. Intensive care nurses should be motivated to maintain the human element of nursing while rendering care with the help of sophisticated gadgets. Also, tactile stimulation is not a routine part of the nursing care in intensive care unit. Tactile stimulation also gives markable reduction in anxiety in various studies and is rarely studied so far in our setup. Hence, this motivated and encouraged the investigator to select the present study.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of the tactile stimulation on anxiety and selected physiological parameter (HR) among patients admitted in Intensive Care Units (ICUs) of Government Rajaji Hospital at Madurai.

OBJECTIVES

- To find out the level of anxiety and selected physiological parameter before and after providing tactile stimulation among patients admitted in ICUs in experimental group
- To find out the pre-test and post-test level of anxiety and selected physiological parameter among patients admitted in ICUs in control group
- To evaluate the effectiveness of tactile stimulation on anxiety and selected physiological parameter among patients admitted in ICUs in experimental group.

- To find out the relationship between the post-test anxiety level and selected physiological parameter among patients admitted in ICUs in experimental group.
- To seek association between the pre-test anxiety level with selected demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU) of experimental and control group
- To find out the association between the pre-test selected physiological parameter with selected demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU) of experimental and control group.

HYPOTHESES

H1:

The mean post test level of anxiety of patient admitted in ICU who have received tactile stimulation will be significantly lower than their mean pre-test level of anxiety.

H2:

The mean post test level of selected physiological parameter of patient admitted in ICU who received tactile stimulation will be significantly lower than their mean pre-test level of selected physiological parameter.

H3:

The mean post test level of anxiety of patients admitted in ICUs in experimental group who have received tactile stimulation will be significantly lower than the mean post test level of anxiety score of the control group.

H4:

The mean post test level of selected physiological parameter of patients admitted in ICU of experimental group will be significantly lower than the mean post test level of selected physiological parameter of the control group.

H5:

There will be a significant positive relationship between the post test level of anxiety and selected physiological parameter of patients admitted in ICUs in experimental group who have received tactile stimulation.

H6:

There will be a significant association between the pre test level of anxiety among patient's admitted in ICUs with selected demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU) of experimental group and control group.

H7:

There will be a significant association between the pre test level of selected physiological parameter (HR) among patient's admitted in ICUs with demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU)of experimental group and control group.

OPERATIONAL DEFINITIONS

EFFECTIVENESS

Effect is defined as something brought about by a cause or agent; as a result.

In this study it refers to the outcome of tactile stimulation in terms of reducing anxiety and selected physiologic parameter (HR).Anxiety was measured by the score obtained by the subject in modified anxiety part of CINT questionnaire. Level of selected physiological parameter (HR) was measured by checking apical heart rate per minute with the help of stethoscope.

TACTILE STIMULATION

It is defined as the activating of nerve signals beneath the skin's surface that inform the body of texture, temperature and other by touch-sensations.

In this study it refers to gentle tactile stimulation of head, palm and feet by using effleurage and using finger tips alone for 30 minutes twice a day for three days continuously.

ANXIETY

A chronic state of tension which affects both mind and body.

In this study it was measured and scored by modified anxiety part of CINT questionnaire among conscious patients who were admitted in ICUs for more than 12 hours. Pre test was done on first day before tactile stimulation, post test was done 3rd day after 6 sessions of tactile stimulation.

PHYSIOLOGICAL PARAMETER

In this study selected physiological parameter is heart rate (HR).

Heart rate is defined as contraction and relaxation of the heart known as the cardiac cycle or the heart beat. This cycle is repeated 60-100 times a minute in the adult stimulated by impulses generated by the SA node.

In this study normal rage 70-100 beats per minute has taken as normal Level of selected physiological parameter which was measured by checking apical heart rate per minute with the help of a stethoscope. Heart rate was checked in pre test and post test of each session of tactile stimulation.

PATIENTS ADMITTED IN INTENSIVE CARE UNITS

ICU is defined as the specially equipped area designed for the treatment of patients with sudden life threatening conditions.

In this study it refers to patients admitted in IRCU, IMCU, and SICU of Government Rajaji Hospital Madurai.

IRCU: Intensive Respiratory Care Unit An organized approach for the management of acute respiratory failure in an intensive general care unit that utilizes a team of consultants including a general physician, a surgeon, respiratory care nurses, physical therapists and a blood gas technician.

SICU: The Surgical Intensive Care Unit gives care for critically ill general surgery and trauma patients who have undergone complex surgical procedures.

IMCU: Intensive medical care unit is a branch of medicine concerned with the diagnosis and management of life threatening conditions requiring sophisticated organ support and invasive monitoring.

ASSUMPTIONS

This study is based on the assumptions that

- Tactile stimulation has no adverse effect among patients admitted in intensive care units
- The anxiety score differs from one individual to another.
- Anxiety increases the heart rate
- Patients admitted in ICUs have anxiety
- The nurses have an important role in promoting a healing environment for patients admitted in intensive care units.

DELIMITATIONS

- This study is delimited to the patients who are conscious and admitted in selected ICUs of Government Rajaji Hospital
- The patients who have spent more than 12 hours in ICUs
- The patients who fall into the mild and moderate level of anxiety score as per the CINT anxiety questionnaire.
- 30 minutes of Tactile stimulation for twice a day continuously for 3 days
- The data collection period for only 6 weeks.

PROJECTED OUTCOME

This study will reveal the effectiveness of tactile stimulation on level of anxiety and selected physiological parameter (HR). The findings of the study will help the health professionals in using tactile stimulation in ICU settings.

CONCEPTUAL FRAME WORK (ROY'S ADAPTATION MODEL)

The conceptual framework of this study is based on the sister Calista Roy's adaptation model (1939) which involves four concepts person environment nurse and health. The adaptive system has four components like input, processes, effectors and output. For the present study the above mentioned components have been modified as follows.

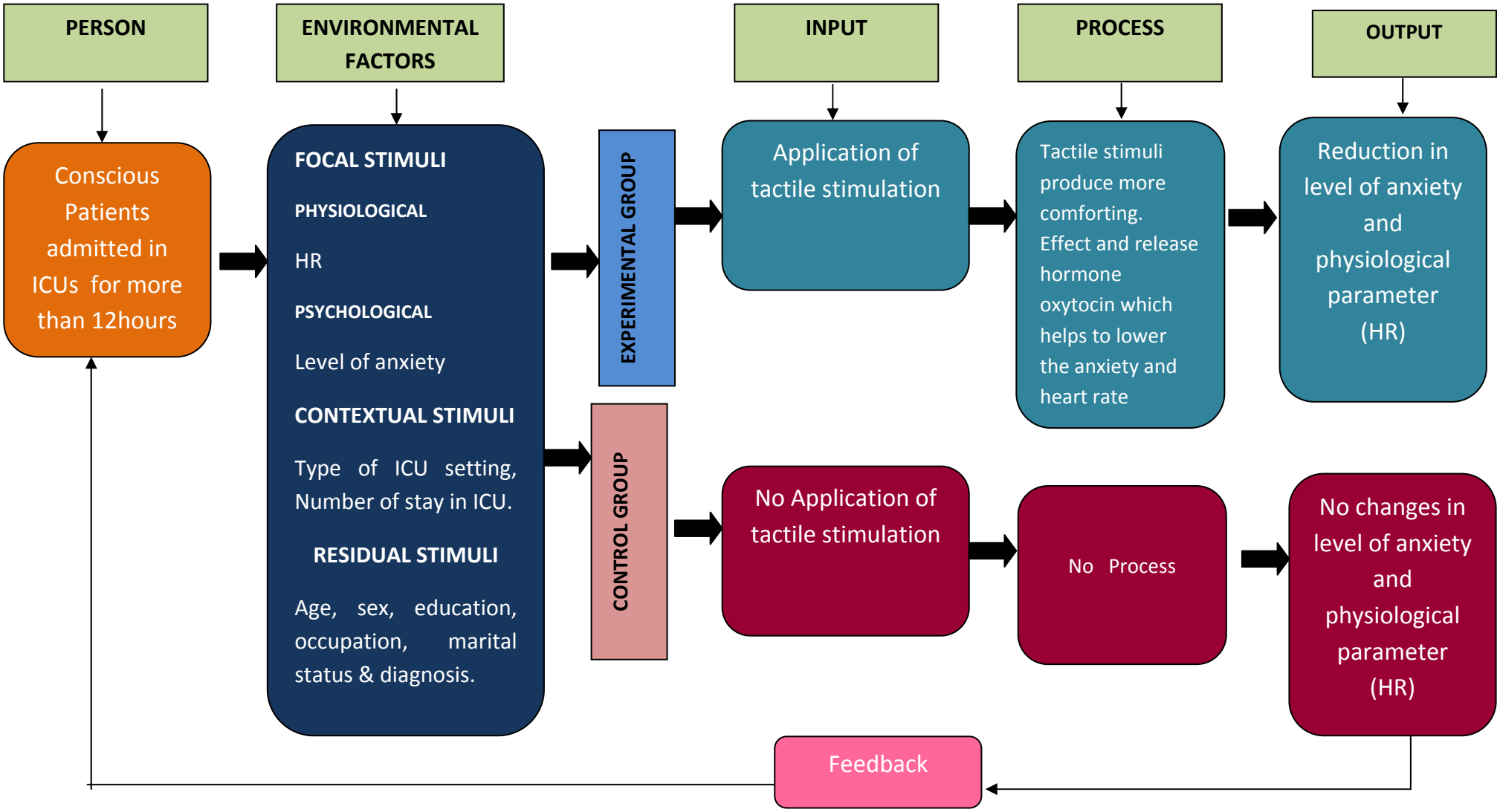
Roy states that the recipient of nursing care may be a individual, a family, a group community or a society each to be considered as an adaptive system. In this study the focus was on individual persons as living systems which are in constant interaction with their environment.

In this study tactile stimulation was considered as regulator coping mechanism as input. The term environment was defined as all the conditions circumstances and influences surrounding and affecting the development and behaviour or person and group.

Factors in the environment that affect the person were categorized as focal contextual and residual stimuli. In this study Focal stimuli were anxiety and changes in selected physiological parameter. Residual stimuli were age, sex, diagnosis, occupation, education, marital status. Contextual stimuli are type of ICU and number of stay in ICU.

In this study positive and negative response to tactile stimulation on level of anxiety, selected physiological parameter (HR) were noted as the output. In case of, negative results they would become the feedback where it must be reassured and reinstituted with tactile stimulation in the same manner or in a modified way.

CONCEPTUAL FRAMEWORK BASED ON ROY'S ADAPTATION MODEL



CHAPTER – II

REVIEW OF LITERATURE

"What is wonderful about great literature is that it transforms the man who reads it towards the condition of the man who wrote"

- E.M. Forster

The review of literature is a research report and is a summary of current knowledge about a particular problem and includes what is known and not known about the problem. The literature is reviewed to summarize knowledge for use in practice or to provide a basis for conducting a study (Burns and Grove, 2005).

This chapter deals with the literature review of available literature from published text books, research and non research articles, and medline search related to the present study problems.

The literature review is arranged in the following headings,

i. Studies related to prevalence and risk of anxiety in ICU's

ii. Reviews related to tactile stimulation on anxiety and heart rate.

iii. Role of nurse in caring patients in ICU.

STUDIES RELATED TO PREVALENCE AND RISK OF ANXIETY IN ICU:

Dorothy, et al (2012) had done a prospective cohort study of 157 mixed diagnosed highest anxiety patients in a large general intensive care unit (ICU). Data on four groups of risk factors (clinical, acute psychological, socio demographic and chronic health) were collected during ICU admission, post traumatic stress disorder (PTSD) depression, anxiety and quality of life were assessed using validated questioners at three months

(n=100). Multi variable analysis was used, at followup 55% of patients had psychological morbidity. 27.1% had probable PTSD; 46.4% found to have probable depression, and 44.4% had anxiety. Strikingly high rates of psychological morbidity were found in this cohort of intensive care survivors.

Dorrie and Fontaine (2008) described in his article on impact of the critical care environment on the patient, anxiety is the psycho physiological signal that the stress response has been initiated. Over 70% of ICU patients experience anxiety. A survey of 2500 members of the American Association of Critical Care Nurses (AACN) found that five of the most important clinical indicators of anxiety are agitation, increased blood pressure, increased heart rate, the patient's verbalization changes and restlessness (AACN, 2009).

Kramer, (2009) conducted the prospective repeated cohort study to quantify the levels of anxiety experienced by Intensive Care Unit patients just before transfer to the ward and then twice after transfer to the ward in order to test the hypothesis, that anxiety levels would change over the three data collection. In the 3 months of study, 249 patients were admitted to the ICU. The mean anxiety levels remained low at all measurement points and did not change over time. Anxiety was present in six (17%) patient at time 1, in three (6.8%) patients at time 2, and in two (4.5%) patients at time 3. This small study provides a start to the prospective mapping of anxiety levels on time of transfer and shortly after transfer from an ICU to the wards.

Sharmila (2011) conducted the study to compare the stressors experienced by patients and nurses, perception of the patients stressors admitted in ICU of selected hospitals at Madurai. Design used in this study was descriptive comparative study

design. Purposive sampling technique was used. The total number of sample size consisted of 80 among that 40 were nurses who are working in ICU and 40 were patients who were admitted in ICU. The study was carried out by using modified intensive care unit environmental stressors questionnaire (ICU-ESQ). This tool consists of 50 items, which are rated in a four-point likert-type scale. The items corresponded to stressors that are related to physical stressors (13 items), Psychological stressors (22 items), and the ICU environment stressors (15 items). The findings revealed that the comparison of mean level of stressors experienced by patients (117.3) was higher than the mean stressors score of the nurses (114.8). The mean score of physical stressors of patients (33.5) is higher than mean score of nurses (32.1) psychological stressors of patients (52.5) is higher than mean score of nurses (51.8), environmental stressors of patients (31.2) is higher than mean score of nurses (30.8). The being restricted by tubes/lines was ranked as top stressor by both patients 20 (16.7%) and nurses 19 (15.8%). Fear of death was ranked as the second stressor by both patients 15 (12.5%) and nurses 16 (13.3%) and being in pain was ranked as the third stressor by both patients 14 (11.7%) and nurses 12 (10.0%). There was no significant association between the level of stressors perceived by patients and nurses and their demographic variables.

REVIEWS RELATED TO TACTILE STIMULATION ON ANXIETY AND HEART RATE:

Therapeutic touch is an complementary therapy that is used to help with the anxiety and pain related to cancer treatment therapeutic touch has shown promise in

helping patients with cancer find relief from pain and anxiety (American Cancer Society, 2006).

Linda and Thomas (2010) conducted parallel group randomized control trial to determine healing touch on anxiety, stress, pain, and selected physiological measures of hospitalized sickle cell disease adult experiencing vaso-occlusive pain episode. For anxiety, with in groups comparison showed a statistically significant reduction for the attention controlled with music (P=.01). The trends identified in this study warrant further research on healing touch's effect on anxiety, stress, and pain.

Gagne and Toye (1994) conducted a study to examine the two non-invasive procedures on experienced anxiety. Thirty one inpatients of veterans administration psychiatric faculty were randomly assigned to one of two treatment conditions (therapeutic touch and relaxation therapy) or to a therapeutic touch placebo condition. Multivariance analysis of variance showed that, relaxation and the nursing intervention of therapeutic touch resulted in significant reduction in anxiety.

Olson and Sneed (1999) conducted study with four group repeated measures experimental design divided 40 healthy professional caregivers into high and low anxiety groups and further into 'therapeutic touch' and comparison groups. The effectiveness of the use of therapeutic touch in reducing anxiety was evaluated.

Haricson, Berglund, Mattaa and Sagesten (2006) conducted study among five nurses with a touch therapist training were interviewed about their experiences of preparation before giving tactile stimulation in an ICU. To analyze the meaning of preparation as a phenomenon, Giargi's descriptive phenomenological approach was used. 44 patients were randomized to either an intervention group (n=21) or a control group

(n=23). In the intervention study i) No significant difference were shown for oxytoxin levels between intervention and control group, ii) There were significantly lower levels of anxiety for patients. The impact on stress parameter were limited, except for levels of anxiety which declined significantly.

Kathleen and Adams (2006) done a quasi experimental study to examine the effects of healing touch on cardiovascular variables in critically ill patients. Twenty five patients admitted to the medical intensive care unit were studied. Cardiovascular variables (HR systolic blood pressure, Diastolic blood pressure and MAP) and oxygenation variable were collected pre and post both healing touch. The findings of the study indicated that there was a significant different for diastolic blood pressure for the group who received healing touch first as compared to the subjects who not received. There was a tendency for the cardiovascular outcomes to show the greatest decrease for the intervention of healing touch but they did not show clinical significance.

Krucoff., et al (2004) conducted randomized controlled study to noetic healing intervention (Tactile touch, prayer, meditation and education) was conducted with 150 patients undergoing angioplasty. Patients received stress management (Tactile touch, prayer) before surgery. There was a 25-30% absolute reduction in adverse peri-procedural outcomes in patients treated with any noetic therapy compared with standard therapy. In those with a high level of anxiety noetic therapy appeared to show greater reduction in absolute in-patient complication rates compared with standard therapy.

Vincent, Drescher, Gantt and Whitehead, (2009), conducted study on heart rate response to touch, in which the evaluated the effect of tactile stimulation on heart rate (HR). They found large decrease occurred when the experimenter placed his hand on the

subject's wrist (X = 9.16 bpm, P< 0.005). To determine if tactile stimulation alone accounts for these differences three comparisons were made in a second experiment and found no changes was noted in the absence of tactile stimulation.

Zaha Zare, Hooman Shansavari, and Moeini (2008) conducted study on effects of therapeutic touch on the vital signs of patient before coronary artery bypass graft surgery. Clinical trail with 44 samples that were selected by easy sampling method and based on two separate lists of random numbers for both men and women. They were devided into two groups. In the therapeutic touch stimulation group, intervention therapy was applied on patients for 20 minutes. Data was analyzed using descriptive and inferential statistics. Results showed that there were significant difference between the mean pulse rate before and after intervention in both groups (P<0.001). Results also showed that there was a significant difference between the average number of breathing before and after intervention in both group (P<0.001).

Maria Adela and Silva, (2008) conducted the effects of healing touch on the amount of narcotic analgesic self administered post operatively, the frequency of bowel program treatments and medications administered to patients with abdominal hysterectomies. Sixty preoperative patients were randomly assigned to one of three groups; healing touch, back massage and no treatment. The results indicated that the healing touch subjects had a significantly higher level of recovery, also reduction of systolic and diastolic blood pressure and pulse rate were statistically significant for the healing touch group.

Bruce and Julian (2009) conducted study on Panic Anxiety and heart rate variability. These data are consistent with the cardiac symptoms of panic attacks, as well

as with developmental evidence that links high vagal tone with enhanced attention, effective emotion regulation, and organismic responsively.

Ischiro kawarchi, Davi Sparrow and Pantel (2008) conducted prospective cohort studies suggest that pholic anxiety is a strong risk fact for fatal coronary artery disease in particular sudden cardiac death. Tested hypothesis in 581 men aged 47 to 87 years, enrolled in the normative aging study. Symptoms of anxiety were assessed using the crown-crisp index. Men reporting higher levels of phobic anxiety had a higher resting HR (P=0.025). These data suggest that phobic anxiety is associated with altered cardiac autonomic control and hence increased risk of sudden cardiac death.

Diane, Charles, Gessert and Colleen (2009) done a prospective study designed to examine the potential of massage to reduce agitation in cognitively impaired nursing home residents. Data was collected during baseline (3 days) intervention (6 days) and at follow up. Five aspects of agitation were assessed. Wandering, verbally agitated physically agitated socially inappropriate, and resist care. Subjects agitation was lower during the touch therapy. Intervention than at baseline (2.05 Vs 1.25, P<0.001) and remained lower at follow up of the 5 agitated behaviours examined in this study.

Pavelettee Sansone and Louise Schmitt (2000) had undertaken a one year demonstration project and looked at the effects of gentle massage on two groups of elderly nursing home residents those suffering from chronic pain and those with dementia who were exhibiting anxious or agitated behaviours. The project was devided into three 12 week phases; different and resident were involved in phase. 59 of 71 residents completed the 12 week programme. Pain scores declined at the end of each phase, and

anxiety scores declined in two of the three phases. 84% of the nursing attendants reported that the residents enjoyed receiving tender touch.

ROLE OF NURSE IN CARING ICU PATIENT:

Wilkin and Slevin (2007) conducted a descriptive and qualitative study regarding the meaning of caring of nurses: an investigation into the nature of caring work in an intensive care unit. Semi-structured interviews were conducted to collect data on the experiences of twelve nurses who were selected by purposive sampling. Data analysis involved using Colaizzi's reductive procedure. The findings suggest that the nurses in the study participated in delivering holistic and humane care of the patient and their relatives. The essential structure of caring was identified as a process of competent physical and technical action imbued with affective skills. This study revealed caring to be synonymous with nursing. The descriptive accounts of the nurses experiences of caring in this study attempt to illuminate the nature of intensive care unit nursing. The participants described caring as a process involving feelings together with professional knowledge, competence, and skill and nursing action. This involved the holistic care of the patient and relatives in meeting their individual needs.

Stayt (2002) conducted an explorative study regarding nurses experiences of caring for families with relatives in intensive unit. A purposive sample of 12 Registered Nurses working in an adult intensive care unit were Interviewed transcripts were analysed using Colaizzi's framework. The data were collected in August 2005. Findings revealed that participants experiences were categorized into the following themes: defining the nurse's role, role expectations and role conflict. Participants reported lack of confidence,

doubts their professional competence and conflicts between their professional and personal self. These experiences were linked to participants expectations and self-imposed standards. Researcher concluded that registered nurses caring for families who have relatives in adult intensive care units face a fundamental conflict both between role expectations and patient care and between professional ideals and being a human.

The role of the nurse in controlling the environment to promote healing, to create a positive, healing environment for family focused care. The needed strategies are directed towards titrating the environmental stimuli, ensuring the comfort of the patient, controlling excessive noise and lighting, providing non pharmacologic approaches to alleviating anxiety, and promoting sleep. (Fontaine, 2005).

Role of nurses in ICUs is expected to develop skill which helps them deal with the problems experienced by their patient sand the families. Nurses must be educated to suggest reductions of stressors and motivated to maintain the human element of nursing (Jaya Kuruvila, 2007).

Critical Care nursing is that specialty with in nursing that deals specifically with human responses to life threatening problems. A critical care nurse is a licensed professional nurse who is responsible for ensuring that acutely and critically ill patients and their families receive optimal care. (AACCN).

- Respect and support the right of the patient or the patient's designated surrogate to autonomous informed decision making.
- Help the patient obtain necessary care.
- Respect the values, beliefs and rights of the patient.

- Provide educate and support to help the patient or the patient's designated surrogates make decisions.
- Monitor, and safeguard the quality of care that patient receives.
- Act as a liaison between the patient, the patient's family and other health care professionals.
- Focus on making clinical decisions, risk appraisal, interpretation of diagnostic tests and providing treatment.

CHAPTER - III

RESEARCH METHODOLOGY

"Every discourse, even a poetic or oracular sentence, carries with it a system of rules for producing analogous things and thus an outline of methodology"

- Jacques Derrida

Research methodology indicates the general pattern of organizing the procedure of gathering valid and reliable data for an investigation. It includes research approach, research design, the setting, samples, sampling technique, population, criteria for samples selection, method of sample selection, description of the tool, validity, reliability, pilot study, procedure for data collection, plan for data analysis and protection of human subjects.

The present study was designed to assess the effectiveness of tactile stimulation on anxiety and selected physiological parameter (HR) of the patients admitted in ICUs.

RESEARCH APPROACH

The research approach which was used for this study was an Quantitative approach. According to polit and hungler (2004) "Quasi experimental approach involves the manipulation of an independent variable that is institution of an intervention."Quasi experiment however lacks either the randomization or control group features that characterizes true experiment".

RESEARCH DESIGN

TREECE and TREECE (1996) say that "a research design is a blue print for conducting the study that maximizes the control over factors that could interface the validity of the findings".

Quasi experimental Pre test post test non equivalent control group design was used to assess the effectiveness of tactile stimulation on level of anxiety and selected physiological parameter.

This design is represented below;

Subject	**Pre Test**			**Manipulation**	**Post Test**		
	Day 1	**Day 2**	**Day 3**		**Day 1**	**Day 2**	**Day 3**
Experimental Group	A_1 HR_1 HR_3	 HR_5 HR_7	 HR_9 HR_{11}	X	 HR_2 HR_4	 HR_6 HR_8	A_2 HR_{10} HR_{12}
Control Group	A_1 HR_1 HR_3	 HR_5 HR_7	 HR_9 HR_{11}	-	 HR_2 HR_4	 HR_6 HR_8	A_2 HR_{10} HR_{12}

KEYS:

X - Administration of tactile stimulation

A_1 - Assessment of pre test level of anxiety for both experimental & control group.

A_2 - Assessment of post test level of anxiety for both experimental & control group.

HR_1 HR_3 HR_5 HR_7 HR_9 HR_{11} - Assessment of pre test level of physiological parameters (HR) in experimental and control group.

HR_2 HR_4 HR_6 HR_8 HR_{10} HR_{12} - Assessment of post test level of physiological parameters (HR) in experimental and control group.

VARIABLES

INDEPENDENT VARIABLES: Tactile stimulation.

DEPENDENT VARIABLES: Level of anxiety and selected physiological parameter (HR) of Patients who are conscious in ICUs.

RESEARCH SETTING

This study was conducted at Government Rajaji Hospital, Madurai. It is 3km away from the Sacred Heart Nursing College. This is a multi super speciality hospital with 2418 beds. The study was conducted in IMCU with 12 beds ,IRCU with 10 beds and SICU with 5 beds. The average admission in these units will be 12. These ICUs has the bio-medical equipments such as ventilators, suction apparatus, defibrillators, monitoring devices such as ECG machines and hemodynamic monitors. Both medical and surgical cases admitted in all ICUs.

STUDY POPULATION

The target population of this study was patients who were admitted in ICUs in Government Rajaji Hospital at Madurai.

SAMPLE

Patients who were conscious stayed minimum 12 hours in ICUs (IMCU, IRCU, & SICU) of Government Rajaji Hospital Madurai, who fit into inclusion criteria.

SAMPLE SIZE

The samples consists of 60 patients admitted in ICUs in which

- 30 samples were in experimental group and
- 30 samples were in control group.

CRITERIA FOR SAMPLE SELECTION

The sample was selected based on the following criteria

INCLUSION CRITERIA

- Patients who were conscious admitted in ICUs
- Patient who have spent minimum of 12 hours in ICUs
- Patient falls into mild to moderate level of anxiety as per CINT anxiety questionnaire.
- Patients Included both male and female
- Patient who knows to speak Tamil and English
- Patient who were willing to participate in the study

EXCLUSION CRITERIA

- Patients who were comatose unconscious and on anaesthetic and sedative drugs.
- Patient's with cardiac abnormalities like heart failure and arrhythmia
- Patients who were with skin disease and contra indicated for tactile stimulation.
- Patients who were not able to communicate

SAMPLING TECHNIQUE:

Purposive Sampling Technique was used.

According to Polit and Hungler (2003) purposive or judgement sampling proceeds on the belief that a researcher knowledge about the population and its elements can be used to hand pick the cases to be included in the samples. Since it was not possible to do simple random sampling, samples selected based on specific criteria, this technique was found appropriate for the purpose of the study.

DESCRIPTION OF THE TOOL

TOOL:1

This consists of demographic variables of patients that are age, sex, diagnosis, occupation, education, marital status, type of ICU , and number of stay in ICU.

TOOL:2

The original anxiety part of CINT questionnaire was downloaded from online, which was used for many studies. This questionnaire contains 15 items which was assessing anxiety level, among patients admitted in ICUs. In this questionnaire 2 questions modified according to our settings, i.e. i) Uncertainty as uncomfortable smell

and sound and ii) Melancholey as discomfort experienced by the patients because of wearing in ICU gown. In this the anxiety measure questions items are rated on a 4 point Likert scale from normal, mild, moderate to severe anxiety.

1. 1 – 15 – normal
2. 16 – 30 – mild anxiety
3. 31 – 45 – moderate anxiety
4. 46 – 60 – severe anxiety

TOOL:3

Assessment of Apical Heart Rate per one minute with the help of stethoscope, before and after tactile stimulation. Normal HR= 70 – 100 beats per minute.

INTERVENTION

Pre Assessment:

Adjust bed height comfortable position and lower side rails if any. Place client in comfortable position (supine) Drape the client, Expose only the area where tactile stimulation is to be applied. Ask the patient to close the eyes and concentrate on each body part to relax one by one starting from head to toe.

TACTILE STIMULATION TO HEAD AND SHOULDER

Relax the scalp using slow gentle stroking and touch all over the head, over and over again.

The procedure began from the base of the skull at four pressure points(point 1: at centre on border of occipital, point 2:an inch from point 1 to left side, point 3:an inch from point 2, point 4:an inch from point 1 to right side) in the base which was given

pressure with the help of the finger tips (little finger, ring finger, middle finger, index finger- 4 fingers at a time)for about 2minutes.

Moving towards the forehead to crown point

The four fingers tips were used to give pressure from the forehead point towards the crown point. At the crown point, Tip of the index finger was used to give a pressure for one minute.

Moving sidewise,

Four fingers tips of hand were used to give gentle pressure, the fingers moved sidewise and then for the whole head, giving pressure for about 4 minutes(a gentle effleurage with palms of hand was given at the end)

Towards fore head

The pituitary points of fore head was given pressure with the help of finger tip of index finger simultaneously on both the sides for 2 minutes

Next to pineal point

The pineal point of fore head was given pressure with the help of finger tip of index finger for 1 minute.

And then to thyroid point

The thyroid point was given pressure with the help of five fingers tips for one minute.

Hold the head from the back with the help of both the hands and gently swift the head in rotatory motion of left to right

A gentle touch was provided with the palm and finger pad of the hand on fore head and base of the scalp at the same time.

The shoulder was touched gently for a minute by standing at the back of the patient.

TACTILE STIMULATION TO HAND

The hand was held in order that the meridian of the heart region in hand was pressurized by finger pads of the investigators hands. The little finger was given a pressure along for one minute and the proximal aspect of the palm meridian was given a pressure for one minute.

Each finger tips of the patient was given gentle pressure by investigator.

TACTILE STIMULATION TO FOOT

The finger tips of the thumb of both the hands were used to give pressure to the heart meridian of the sole, at the same time other four fingers of each hand was giving pressure to the other lateral aspect of the foot. Then, the hallux was given pressure with the finger tips of the thumb in a circular motion, the same procedure was followed to other 4 toes, in between of each toes a single finger tip was used to give pressure

Then, the whole sole of the foot was given pressure in a zigzag manner in order that every pressure points were given pressure for five minutes.

Effleurage was given to body part after completion of tactile stimulation.

At the end of the procedure, the patient was instructed to open his/her eyes and relax.

DEVELOPMENT OF INTERVENTIONAL STRETEGY

A protocol was developed for administering Tactile stimulation. The investigator underwent a formal training under an expert in the field of yoga of touch therapy. Based on the review of literature steps of procedure were listed down. The content included in tactile stimulation was submitted to experts and finalised.(annexed in appendix v)

TESTING OF THE TOOL

CONTENT VALIDITY

The tool and techniques were developed by the investigator based on review of literature. The tools were given to five experts in the fields of nursing medicine and yoga for content validity. The items were modified based on their suggestion.

RELIABILITY

The reliability of tool determined by Split half method for anxiety and by inter rator method for assessing apical heart rate were per minute with the help of stethoscope.

There was a significant score of r = 0.8 for both anxiety and heart rate.

PILOT STUDY

Pilot study was conducted at Government Rajaji Hospital Madurai, to test feasibility, practicability relevance of the study and to plan for data analysis. Formal administrative approval was obtained from the head of the institution. Six patients admitted in ICUs were samples and the pilot study was conducted in the manner in which the final study would be done. Data were analysed to find out suitability of statistics. Findings of the pilot study revealed that it was feasible to conduct the study.

DATA COLLECTION PROCEDURE

Before starting the study the researcher had obtained formal permission from all departmental heads of ICUs to conduct the study. Oral consent had also been obtained from each samples and their relatives. The total data collection period was 6 weeks. During first 4 weeks samples for experimental group were selected, following 2 weeks control group were selected to prevent the intervention contamination.

Total of 30 samples in experimental were recruited in 6 batches. Each batch consisted of 5 samples for convenient administration of intervention and assessment.

In order to find out the level of anxiety of samples for each day the investigator assessed the anxiety using modified anxiety part of CINT questionnaire on first day before the administration of tactile stimulation. The assessment took more than 15 minutes to complete. Interventions were carried out twice a day, morning and evening at an interval of 5 hours between two session, each sessions lasting for 30 minutes for each subject and continuously for 3 days. Post anxiety level was measured after all the 6 sessions of tactile stimulation.

Heart rate was assessed by every session of tactile stimulation as pre and post test assessment. In this study normal range was considered as 70-100 beats per minute.

Morning pre test assessment and intervention was carried out from 10.30am – 1.00pm.Evening assessment and intervention was carried out from 3.30pm – 6pm. Anxiety level assessed once as a pre and post test assessment. Heart rate was assessed by every session of tactile stimulation as pre and post test assessment.

In the control group a total of 30 patients were recruited in four batches, each batch consisting 7-8 subjects each. Assessment of anxiety was taken as pre test on first

day, and post test on third day without giving tactile stimulation to control group. Heart rate checked twice for each session at the interval of 30 minutes. Morning assessment and intervention was carried out from 10.30am – 1.00pm.Evening assessment and intervention was carried out from 3.30pm – 6pm.

DATA ANALYSIS

After data collection the data were analysed according to the objectives of the study by using descriptive such as mean, median, standard deviation and inferential statistics such as paired and unpaired‘t’ test, chi-square test, and correlation.

Hypothesis related to effectiveness of tactile stimulation in reducing level of anxiety and selected physiological parameter (HR) was tested using mean standard deviation paired and independent ‘t’ test.

Correlation was used to find out the relationship between the post test score of anxiety and post test score of HR in experimental group.

Chi-square was used to find out association between pre test anxiety score and selected demographic variables.

PROTECTION OF HUMAN RIGHTS

The proposed study was conducted after approval of dissertation committee of the college. Oral consent was obtained from the study samples before starting data collection. Assurance was given and confidentiality was maintained. The subjects were explained that they have rights to withdraw from the study. There was absence of physical and psychological strain to study subjects during the data collection procedure.

CHAPTER – IV

ANALYSIS AND INTERPRETATIONS OF DATA

"It is only with heart that one sees rightly, what is essential is invisible to the eye"

- St. Exupery (1943)

This chapter deals with the descriptions of the subjects, classification, analysis and interpretation of data collected to evaluate the achievement of the objectives of the study. The data collected were tabulated and presented as follows.

ORGANIZATION OF THE FINDINGS:

The analyzed data were organized and presented under the following headings.

SECTION: I

Characteristics of the subjects.

1. Distribution of samples according to demographic characteristics of the subjects
2. Distribution of samples according to the clinical profile of the subjects

SECTION: II

3. Distribution of pre test and post test level of anxiety in experimental group
4. Distribution of pre test and post test level of anxiety in control group
5. Distribution of samples based on their pre test and post test HR level in experimental group and control group

SECTION-III

6. Comparison of mean pre test and post test anxiety score of experimental group.
7. Comparison of mean pre test and post test HR score of experimental group.
8. Comparison of mean pre test and post test of anxiety score of control group.
9. Comparison of mean pre test and post test of HR score of control group.
10. Comparison of post test of anxiety score of experimental group and control group
11. Comparison of post test of physiological parameter (HR) score of experimental group and control group

SECTION: IV

12. Correlation between the post test score of anxiety and post test HR of experimental group.

SECTION: V

13. Association of pre test score of anxiety score of both experimental and control group with demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs, and number of stay in ICUs).
14. Association of pre test score of physiological parameter (HR) score of both experimental and control group with demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs, and number of stay in ICUs).

SECTION – I

Table 1: Distribution of samples according to demographic characteristics of the subjects **N = 60**

Demographic Characteristics	Experimental Group n = 30		Control Group n = 30		Total N = 60	
	f	%	f	%	f	%
Age (in years):						
a. 21 – 30	8	26.66	4	13.33	12	19.99
b. 31 – 40	9	30.00	12	40	21	35
c. 41 – 50	5	16.67	3	10	8	13.34
d. 51 – 60	5	16.67	9	30	14	23.33
e. Above 61	3	10.00	2	6.7	5	8.34
Sex:						
a. Male	17	56.66	16	53.34	33	55
b. Female	13	43.34	14	46.66	27	45
Education:						
a. Primary	11	36.66	8	26.66	19	31.66
b. Secondary	10	33.34	12	40	22	36.67
c. Higher Secondary	6	20	5	16.67	11	18.34
d. Others	3	10	5	16.67	8	13.33
Occupation:						
a. Cooly	13	43.33	15	50	28	46.66
b. Former	9	30	8	26.67	17	28.34
c. Others	8	26.67	7	23.33	15	25

Table Cont

Demographic Characteristics	Experimental Group n = 30		Control Group n = 30		Total N = 60	
	f	%	f	%	f	%
Marital Status:						
a. Married	24	80	23	76.67	47	78.33
b. Unmarried	6	20	7	23.3	13	21.67

The data in the table 1 show that most of the subjects in the experimental group 9(30%) and in the control group 12 (40%) were between the age group of 31-40 years. Regarding sex, both in the experimental group 17 (56.66%) and in the control group 16 (53.34%) of the subjects were males.

Regarding educational status most of the subjects in the experimental group 11 (36.66%) fell under primary education but in the control group 12 (40%) had studied up to secondary education.

It was found that both in the experimental group 13 (43.33%) and in the control group 15 (50%) were coolie workers.

Regarding marital status both in the experimental group and in the control group majority of them were married. In the experimental group 24 (80%) and in the control group 23 (76.67%) were married.

The above data show that the subjects in the experimental group and in the control group were similar in demographic variables such as age, sex, occupation, marital status, except in education.

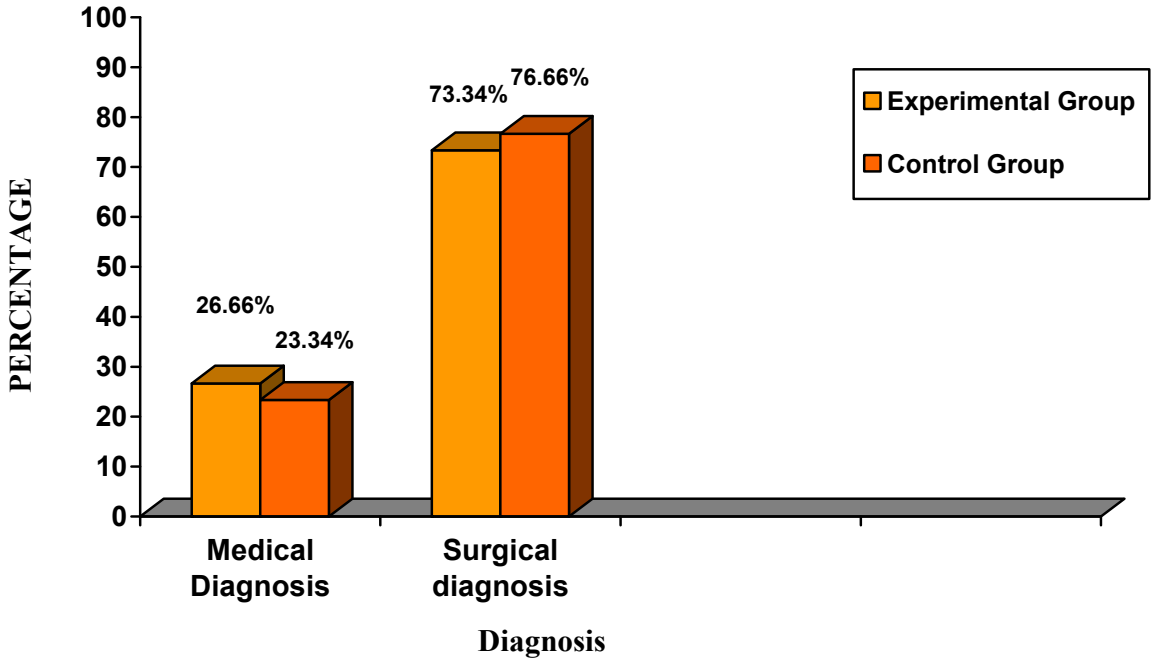


Fig 2: Bar diagram showing the Distribution of subjects according to diagnosis.

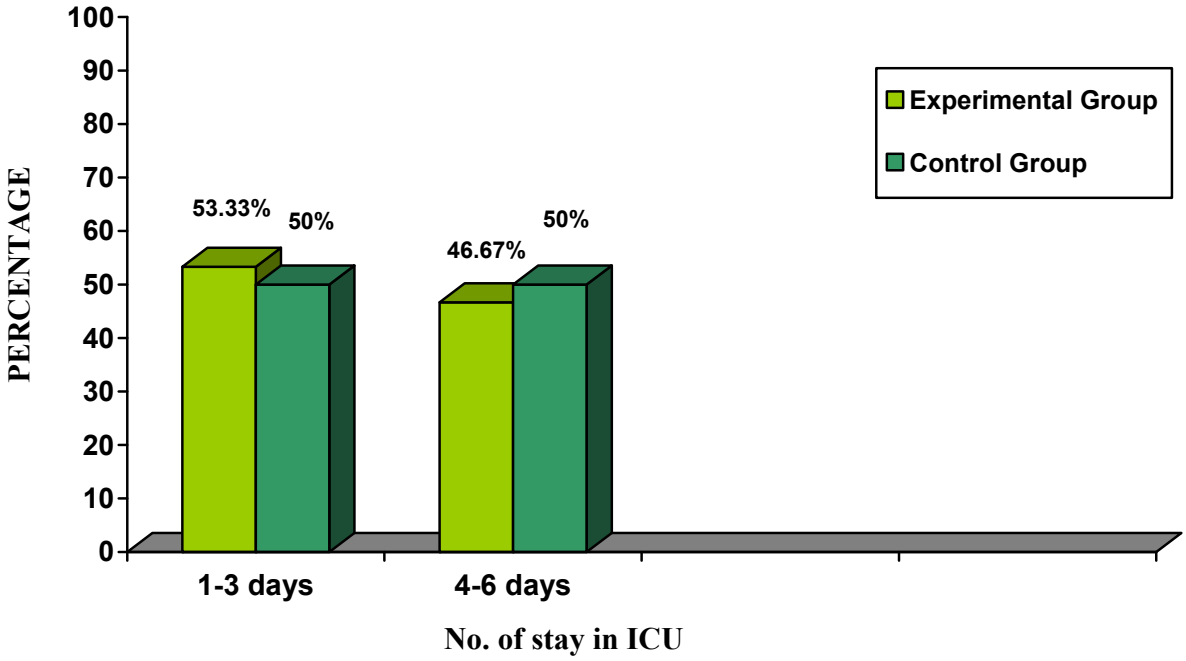


Fig 3: Bar diagram showing the Distribution of subjects according to No. of stay in ICU

Table 2: Distribution of samples according to the clinical profile of the subjects

N = 60

Clinical Profile	Experimental Group n = 30		Control Group n = 30		Total N = 60	
	f	%	f	%	f	%
Diagnosis:						
a. Medical	8	26.66	7	23.34	15	25
b. Surgical	22	73.34	23	76.66	45	75
Type of ICU:						
a. IRCU	2	6.66	7	23.34	9	15
b. IMCU	13	43.34	12	40.00	25	41.6
c. SICU	15	50	11	36.66	26	43.4
No. of Stay in ICU:						
a. 1 – 3	16	53.33	15	50	31	51.6
b. 4 – 6	14	46.67	15	50	29	48.4

The above table shows that 22 (73.34%) in the experimental group and 23 (76.66%) in the control group were admitted with surgical diagnosis.

Regarding the types of ICU, it is noted that most of the people in the experimental group15 (50%) were selected from SICU and in the control group 12 (40%) were selected from IMCU.

Regarding number of stay in the ICU, the most of the people in the experimental group 16 (53.33%) had stayed between 1-3 days and in the most of the people in the control group 15 (50%) had stayed between 4-6 days.

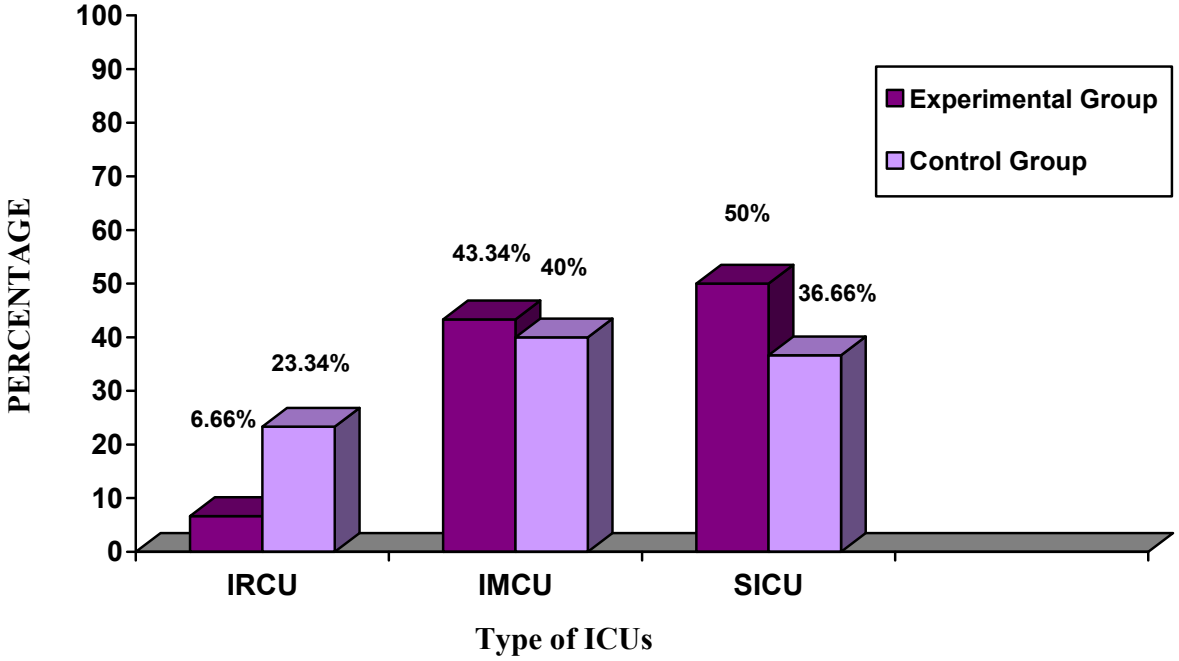


Fig 4: Bar diagram showing the Distribution of subjects according to Type of ICUs.

SECTION: II

Table 3: Distribution of pre test and post test level of anxiety in experimental group

N= 30

Level of Anxiety	Range	Pre test		Post test	
		f	%	f	%
Mild	16-30	5	16.7	25	83.3
Moderate	31-45	25	83.3	5	16.7

Table-3 illustrates the distribution of subjects according to the level of anxiety among experimental group. The pre test anxiety score showed 5(16.7%) in experimental group had mild anxiety status. Before intervention 25 (83.3%) in experimental had moderate anxiety status. Where as after administration of Tactile stimulation on 3rd day, 5 (16.7%) in experimental group had moderate anxiety status and 25 (83.3%) in experimental had mild anxiety status.

This difference in experimental group was due to the effect of tactile stimulation.

Table 4: Distribution of pre test and post test level of anxiety in control group

N= 30

Level of Anxiety	Range	Pre test		Post test	
		f	%	f	%
Mild	16-30	3	10	4	13.3
Moderate	31-45	27	90	26	86.7

Table-4 illustrates the distribution of subjects according to level of anxiety score among control group. The score between 16-30 indicates mild anxiety and 31-45 indicates moderate anxiety. On first day, 3 (10%) samples in control group had mild anxiety level and 27 (90%) were found to have moderate anxiety level. On 3rd day, without tactile stimulation, 4 (13.3%) in control group had mild anxiety and 26 (86.7%) were found to have moderate anxiety status.

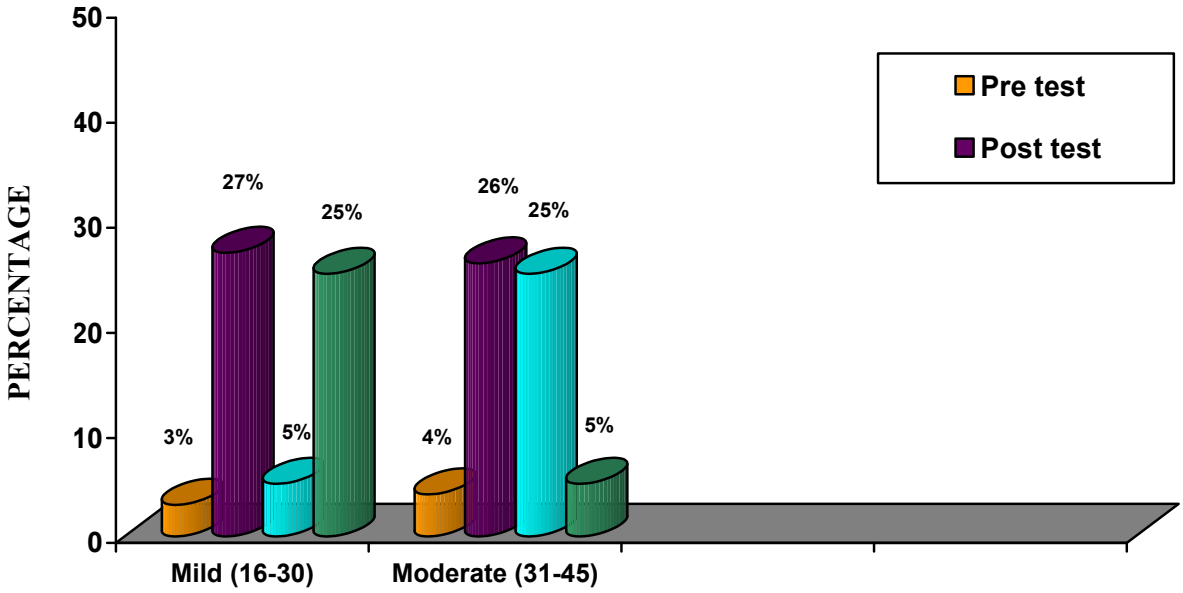


Fig 5: Comparison of frequency level of pretest and post test anxiety of both control group and experimental group.

Table 5: Distribution of samples based on their pre test and post test HR level in experimental group and control group.

Measurement	N	Experimental Group		Control Group	
		Maximum HR/minute	Minimum HR/ minute	Maximum HR/ minute	Minimum HR/ minute
Pre test	30	74	88	88	76
Post test	30	70	88	88	78

Table 5 shows the level of pre test and post test level of physiological parameter in experimental group and control group.

It was noted that the maximum number of patients' had the HR of 74 beats/minutes and minimum number of patients' had the HR of 88 beats/minutes in the pre test of experimental group. After the tactile stimulation, the maximum number of patients' had the HR of 70 beats/minutes and minimum number of patients' had the HR of 88 beats/minutes.

There was a noticeable difference (4) between pre test and post test level of physiological parameter in experimental group.

It was noted that the maximum number of patients' had the HR of 88 beats/minutes and minimum number of patients' had the HR of 76 beats/minutes in the pre test of control group. In the absence of tactile stimulation, the maximum number of patients' had the HR of 88 beats/minutes and minimum number of patients' had the HR of 88 beats/minutes.

There was a no difference between pre test and post test level of physiological parameter in control group.

SECTION-III

Table 6: Comparison of mean pre test and post test anxiety score of experimental group.

Measurement	Mean	N	SD	't' value
Pre test	35.7	30	4.836	
				19.328*
Post test	25.37	30	4.745	

* Significant at 0.05 level.

In the present study, the level of anxiety among subject admitted in ICU was assessed by using CINT anxiety modified questionnaire. The score between 16-30 was indicated as mild anxiety status and 31-45 indicated as moderate anxiety status.

To find out if there is any difference between the mean anxiety status before and after administration of tactile stimulation, the null hypothesis was stated as follows:

H_{01}: The mean post test anxiety score of experimental group will not be significantly lower than the mean pre test anxiety score, after administration of tactile stimulation in experimental group.

Table 6 shows that the mean post test anxiety score 25.37 was lower than the mean pretest anxiety score 35.7. The obtained 't' value was 19.328, which was significant at 0.05 level. This indicates that the difference between the means 10.33 was a true difference and had not occurred by chance. The difference between the two means was due to the effect of tactile stimulation.

Hence the researcher rejects the null hypothesis as the above findings support the research hypothesis.

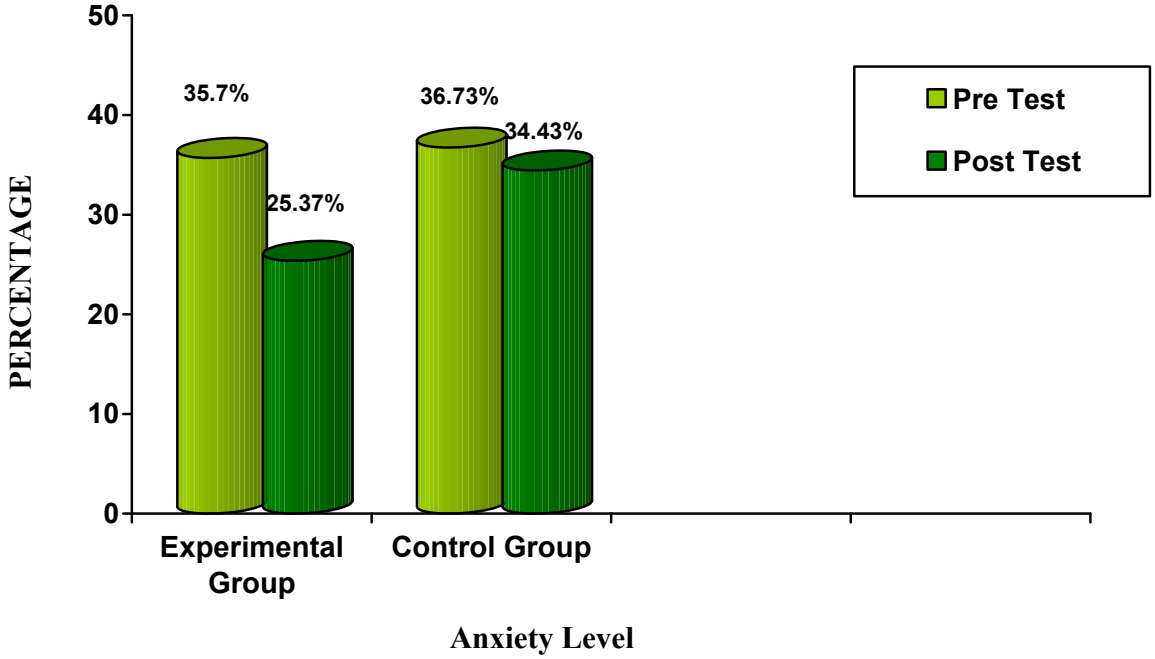


Fig 6: Comparison of mean pre test and post test anxiety level of both experimental and control group.

Table 7: Comparison of mean pre test and post test HR score of experimental group.

Measurement	Mean	N	SD	't' value
Pre test	81.18	30	4.590	
				9.483*
Post test	79.9	30	4.501	

* Significant at 0.05 level.

To find out if there is any difference between the mean heart rate before and after administration of tactile stimulation, the null hypothesis was stated as follows:

H_{02}: The mean post test heart rate score of experimental group will not be significantly lower than the mean pre test heart rate score, after administration of tactile stimulation in experimental group.

Table 7 shows that mean post test HR score 79.9 beats/mt was lower than the pre test HR score 81.18 beats/mt. The obtained 't' value was 9.48 which was significant at 0.05 level. This indicates, that the difference between the mean 1.28 occurred, due to the effect of tactile stimulation.

Hence the researcher rejects the null hypothesis as the above findings support the research hypothesis.

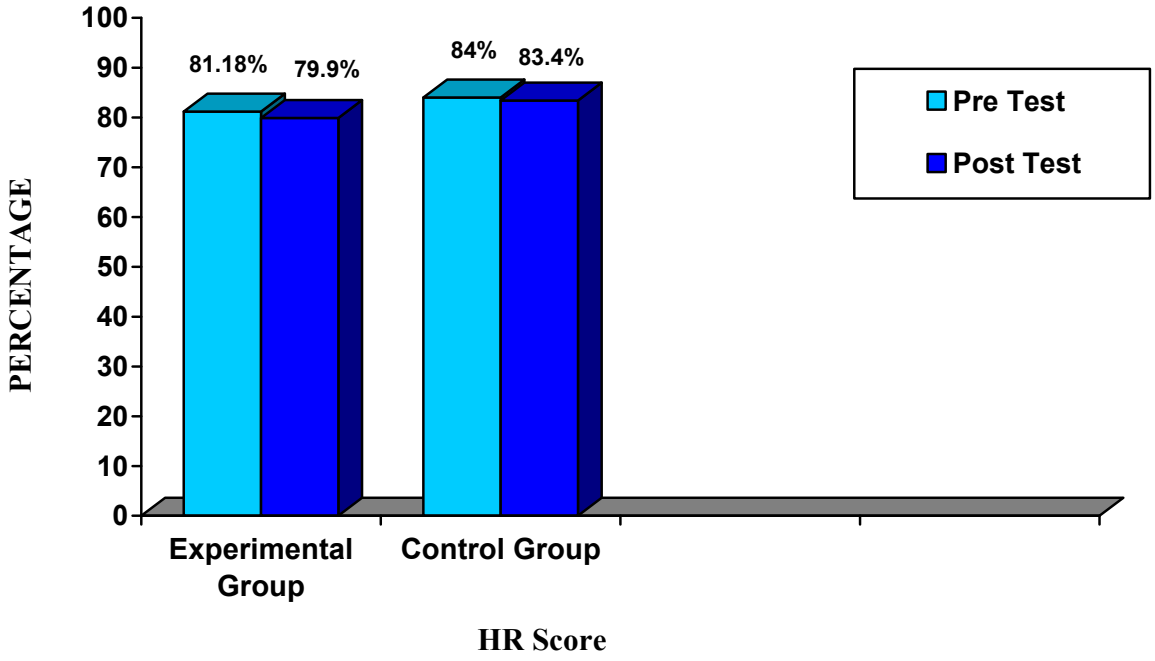


Fig 7: Comparison of mean pre test and post test HR score of both experimental and control group.

Table 8: Comparison of mean pre test and post test of anxiety score of control group

Measurement	Mean	N	SD	't' value
Pre test	36.73	30	3.903	
				8.209*
Post test	34.43	30	3.821	

* Significant at 0.05 level.

Table 8 shows that mean post test anxiety score 34.43 was lower than the mean pretest anxiety score 36.73. The obtained 't' value was 8.209 which was significant at 0.05 level. This indicates that the difference between the mean 2.3 might have occurred by routine ward procedure treatment and prognosis.

Table 9: Comparison of mean pre test and post test of HR score of control group.

Measurement	Mean	N	SD	't' value
Pre test	84	30	3.842	5.472#
Post test	83.5	30	3.967	

In Significant at 0.05 level.

Table 9 shows that mean post test HR score 83.5 beats/mt was lower than the mean pre test HR score 84 beats/mt. The obtained 't' value was 5.472 which was insignificant. This indicates that the difference between the mean 0.5 occurred due to routine ward treatment.

Table 10: Comparison of post test of anxiety score of experimental group and control group

Measurement	Mean	N	SD	't' value
Post test	25.37	30	4.64	
				8.435*
Post test	34.43	30	3.76	

* Significant at 0.05 level.

To findout if there is any difference between the mean anxiety score of experimental group and the control group after administration of tactile stimulation in experimental group and routine treatment in control group, the null hypothesis was started as follows.

H_{03}: The mean post test anxiety score of experimental group who received tactile stimulation will not be lower than the mean post test anxiety score of control group.

Table 10 picturizes that the mean post test anxiety status score of the experimental group 25.37 after administration of tactile stimulation was lower than the mean post test anxiety status score of the control group 34.43. The obtained 't' value was 8.435 which was significant at 0.05 level. This indicates that the difference between the mean 9.06 was a true difference and not occurred by chance. The difference between the two means was due to the effect of tactile stimulation.

As the above findings support the research hypothesis, the researcher rejects the null hypothesis.

Table 11: Comparison of post test of physiological parameter (HR) score of experimental group and control group

Measurement	Mean	N	SD	't' value
Post test	80	30	4.25	0.27#
Post test	82	30	3.8	

#Insignificant at 0.05 level

To find out if there is any difference between the mean HR score of experimental group and control group after administration of tactile stimulation in experimental group and routine treatment in control group the null hypothesis was stated as follows.

H_{04}: The mean post test level of selected of physiological parameters of experimental group will not be significantly lower than the post test level of selected physiological parameter of control group.

Table-11 picturizes that the mean physiological parameter HR score of mean post test of experimental group 80 after administration of tactile stimulation was lower than mean post test of physiological parameter HR score of the control group 82. This indicates, difference between the mean 2 was not a major difference. Also, the obtained 't' value was insignificant at 0.05 level.

As the above findings support the null hypothesis, researcher, rejects the research hypothesis.

SECTION: IV

Table 12: Correlation between the post test score of anxiety and post test score of HR experimental group.

Variables	Post anxiety 'r'	Post HR 'r'
Post anxiety	1	0.215
Post HR	0.215	1

Table 12 shows the correlation. Correlation determines the relationship between the two variables that are anxiety and HR.

To find out the relationship between post test anxiety and selected physiological parameter of experimental group, Karl Pearson's correlation was computed and null hypothesis was stated as follows.

H_{05}: There will be no significant positive relationship between the post test level of anxiety and selected physiological parameter of experimental group.

It was found post anxiety score in experimental group value r=1 indicates perfect positive relationship is presented. It was found post physiological parameter HR score in experimental group value r=0.215 indicates moderately positive relationship is presented.

As the above findings support the research hypothesis and researcher rejects the null hypothesis.

SECTION: V

Table 13: Association of pre test score of anxiety score of both experimental and control group with demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs, and number of stay in ICUs).

Variables	Above mean	Below mean	DF	$\chi 2$
Age: (in years)				
a. 21 – 45	21	18		
b. 46 – 70	11	10	1	0.0062#
Sex:				
a. Male	16	17		
b. Female	15	12	1	2.4#
Education:				
a. Primary	9	10		
b. Secondary	12	10	3	1.026#
c. Higher secondary	5	6		
d. Others	5	3		
Occupation:				
a. Cooley	13	15		
b. Former	9	8	2	0.788#
c. Others	10	5		
Marital Status:				
a. Married	22	25		
b. Unmarried	6	7	1	0.0026#

Table Cont

Variables	Above mean	Below mean	DF	$\chi 2$
Diagnosis:				
a. Medical	6	9		
b. Surgical	25	20	1	1.07#
Type of ICU:				
a. IRCU	7	2		
b. IMCU	8	17	2	5.59*
c. SICU	16	10		
No. of stay in ICU:				
a. 1 – 3	15	16		
b. 4 – 6	16	13	2	0.307#

* Significant at 0.05 level # Not significant.

To find out if there is any association between pre test anxiety score in the both experimental and control group with selected variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs and number of stay in ICU).

Null hypothesis was stated as follows:

H_{06}: There will be no association between the pre test level of anxiety with selected demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs and number of stay in ICU) of experimental group and control group.

In order to findout the association between the anxiety score and demographic variables of both the groups, chi-square test was computed. Table 13 shows that there was no association between pre test anxiety score in the experimental and control group and age, the obtained $\chi 2$ value of 0.0062 at df (1) was not significant at 0.05 level.

It was also found that there was no association between pre test anxiety score of subjects in experimental and control group with sex, the obtained $\chi 2$ value was 0.0062 at df (1) which was not significant at 0.05 level.

With regard to education, there was no association between pre test anxiety score of subjects in both experimental group and control group, and the calculated $\chi 2$ value was 1.026 at df (3) which was not significant at 0.05 level.

It was found that there was no association between marital status and pretest anxiety score of subjects in experimental and control group, the obtained $\chi 2$ value was 0.0026 at df (1) which was not significant at 0.05 level.

Regarding the association between the occupation and pretest anxiety score of subjects in both experimental and control group the obtained $\chi 2$ value was 0.788 at df (2) which was not significant at 0.05 level.

Regarding the association between the diagnosis and pretest anxiety score of subjects in both experimental & control group, the obtained $\chi 2$ value was 1.07 at df (1) which was not significant at 0.05 level.

There was a association between the type of ICUs and pretest anxiety score of subjects in both experimental and control group, the obtained $\chi 2$ value was 5.59 at df (2) which was significant at 0.05 level.

It shows that there was no association between the pretest anxiety score in experimental and control group and the number of stay in ICU. Obtained $\chi 2$ value was 0.307 at df (2) which was not significant at 0.05 level.

In conclusion, there was no association between the pretest anxiety score in both group and age, sex, education, occupation, marital status, diagnosis, type of ICUs and

Number of stay in ICU. But there was an association between pretest anxiety score and type of ICUs.

So, the researcher was unable to reject the null hypothesis and hence partially accept the research hypothesis.

Table 14: Association of pre test score of physiological parameter (HR) score of both experimental and control group with demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs, and number of stay in ICUs).

Variables	Above mean	Below mean	DF	$\chi 2$
Age: (in years)				
a. 21 – 45	18	21		
b. 46 – 70	12	9	1	0.661#
Sex:				
a. Male	15	18		
b. Female	10	17	1	0.296#
Education:				
a. Primary	10	9		
b. Secondary	13	9	3	2.09#
c. Higher secondary	4	7		
d. Others	3	5		
Occupation:				
a. Cooley	12	15		
b. Former	10	7	2	1.48#
c. Others	7	8		
Marital Status:				
a. Married	25	22		
b. Unmarried	5	8	1	1.667#

Table Cont

Variables	Above mean	Below mean	DF	$\chi 2$
Diagnosis:				
a. Medical	10	5		
b. Surgical	20	25	1	5.59*
Type of ICU:				
a. IRCU	8	1		
b. IMCU	13	12	2	15.26*
c. SICU	9	17		
No. of stay in ICU:				
a. 1 – 3	13	18		
b. 4 – 6	17	12	2	1.757#
c. 7 - 9	0	0		

* Significant at 0.05 level, # Not significant.

To findout if there is any association between the pretest level of selected physiological parameter (HR) of both experimental & control group with demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs and Number of stay in ICU).

Null hypothesis was stated as follows:

H_{07}: There will be no association between pre test level of selected physiological parameter (HR) with demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs and Number of stay in ICU) of experimental and control group.

In order to find out the association between the pretest physiological parameter (HR) score of both experimental and control group and selected variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs and Number of stay in ICU) chi-square test was computed.

Table 14 shows that there was no association between (pre test physiological parameter HR score in both experimental & control group) and age. The obtained $\chi 2$ value was 0.661 at df (1) which was not significant at 0.05 level.

It was also found that there was no association between (pre test physiological parameter HR score in both experimental & control group) and sex. The obtained $\chi 2$ value was 0.296 at df (1) which was not significant at 0.05 level.

Regarding the education and pretest physiological parameter HR score in both experimental & control group, the obtained value of $\chi 2$ was 2.09 at df (3) which was not significant at 0.05 level.

With regard to occupation and pretest physiological parameter HR score in both experimental & control group, the obtained value of $\chi 2$ was 1.48 at df (2) which was not significant at 0.05 level.

It was found that there was no association between the marital status and pretest physiological parameter HR score in both experimental & control group. The obtained value of $\chi 2$ was 1.667 at df (1) which was not significant at 0.05 level.

There was an association between the diagnosis and pretest physiological parameter HR score of subjects in experimental and control group, the calculated value $\chi 2$ was 5.59 at df (1) which was significant at 0.05 level.

There was an association between the type of ICUs and pretest physiological parameter HR score of subjects in experimental and control group. The obtained score of $\chi 2$ was 15.26 at df (2) which was significant at 0.05 level.

Regarding the number of stay in ICU and pretest physiological parameter HR score of subjects in experimental and control group, the obtained score of $\chi 2$ was 1.757 at df (2) which was no significant at 0.05 level.

In conclusion, there was no association between the pretest physiological parameter HR score of both experimental & control group (age, sex, education, occupation, marital status, diagnosis, type of ICUs and Number of stay in ICU). But, there was an association with, diagnosis and type of ICUs.

Hence, the researcher, was unable to reject the null hypothesis and partially accept the research hypothesis.

CHAPTER – V

DISCUSSION

"Shared perspectives, shared knowledge, and shared experience are the key foundational building blocks of creativity"

- Simplicio

The aim of the study is to assess the effectiveness of the tactile stimulation on anxiety and selected physiological parameter (HR) among the patients admitted in intensive care units of Government Rajaji Hospital, Madurai.

The study findings are discussed in this chapter with reference to the objectives and hypotheses stated in chapter-I.

DEMOGRAPHIC CHARACTERISTICS OF THE PATIENT:

- Most of the subjects in the experimental group 9(30%) and in the control group 12 (40%) were between the age group of 31-40 years.
- Regarding sex, both in the experimental group 17 (56.66%) and in the control group 16 (53.34%) of the subjects were males. Above finding was supported by Sharmila (2011) who have done a descriptive comparative study on the stressors experienced by patients and nurses' perception of the patient's stressors admitted in ICU, among samples with regards to sex, majority of them were male 26 (65%).
- Regarding educational status most of the subjects in the experimental group 11 (36.66%) fell under primary education but in the control group 12 (40%) had secondary education.

- It was found that both in the experimental group 13 (43.33%) and in the control group 15 (50%) there were coolie workers.
- Regarding marital status both in the experimental group 24 (80%) and in the control group 23 (76.67%) most of them were married.

CLINICAL PROFILE OF THE SUBJECTS:

- Regarding diagnosis of the subject, 22 (73.34%) in the experimental group and 23 (76.66%) in the control group were admitted with surgical diagnosis.
- It is noted in types of ICUs that most of the people in the experimental group15 (50%) were selected from SICU and in the control group 12 (40%) were selected from IMCU.
- Regarding number of stay in the ICU, the most of the people in the experimental group 16 (53.33%) were between the 1-3 days and the most of the people in the control group 15 (50%) were between the 4-6 days. Above finding was supported by Fujin Shih (1996) also reported that the majority of the patients (77%) stayed in the ICU for 1 week or less, 17% for 8 to 14 days & 6% for more than 2 weeks.

OBJECTIVE – I

To find out the level of anxiety and selected physiological parameter before and after providing tactile stimulation among patients admitted in ICUs in experimental group.

Table 4 shows the score before intervention 5(16.7%) in experimental group had mild anxiety status. Before intervention 25 (83.3%) in experimental had moderate anxiety

status, whereas after administration of Tactile stimulation on 3rd day, 5 (16.7%) in experimental group had moderate anxiety status and 25 (83.3%) in experimental had mild anxiety status. This difference in experimental group was due to the effect of tactile stimulation. The present study findings coinside with study of Bala Subramanian (2012) conducted the non-experimental descriptive research design with cross sectional survey approach to assess the level of anxiety among Intensive Care Unit (ICU) patients by purposive sampling, all adult ICU patients remained in ICU for more than 24 hours were included (n=50). Over all observation of anxiety shows that 42% of them had moderate level of anxiety. 32% had severe anxiety and 26% had panic level of anxiety.

Table 5 shows that the level of pre test and post test level of physiological parameter in experimental group. Where as pre test minimum HR 72 and post test minimum HR 70. There was difference between mean pre test and post test as 1.28.

Zaha Zare, Hooman Shansavari, and Moeini (2008) conducted study on effects of therapeutic touch on the vital signs of patient before coronary artery bypass graft surgery. In the therapeutic touch stimulation group, intervention therapy was applied on patients for 20 minutes. Data was analyzed using descriptive and inferential statistics. Results showed that there were significant difference between the mean pulse rate before and after intervention in both groups ($P<0.001$). The above findings configured with the present study findings.

OBJECTIVE – II

To find out the pre test and post test level of anxiety and selected physiological parameter among patients admitted in ICUs in control group.

Table shows that on first day, 3 (10%) in control group were in mild anxiety and 27 (90%) were in moderate anxiety. On 3rd day, without tactile stimulation, 4 (13.3%) in control group were in mild anxiety and 26 (86.7%) were in moderate anxiety status. Except one person, rest all were remaining in moderate anxiety status level only. Table 6 shows that the level of pre test and post test level of physiological parameter in control group. It was noted in pre test and post test maximum HR score of control group were same 88 beats/mt Where as the pretest HR score of control group 76 beats/mt and post test HR score of control group 78 beats/mt. There was a difference between mean pretest HR 84 beats/mt and mean post test HR 83.5 beats/mt. It is supported by Cornock.M.A (1998) the most stressful items according to the rank order were being in pain (5th rank) fear of death (5th rank) missing of spouse (10th rule) unfamiliar surroundings and unusual noises (15th rank) all these stressors, lead and in increasing the anxiety level of the patients admitted in ICU. Anxiety may be defined as an emotional state of apprehension in response to a real or perceived threat associated with motor tension, increased sympathetic activity, heart rate and hypervigilance (Raberta Kaplow, 2009). Any kind of excitement or trauma, even fatigue or exhaustion can accelerate the action of the heart especially in overly anxious individuals. (Mc. Kinley, 2011).

OBJECTIVE – III

To evaluate the effectiveness of tactile stimulation on anxiety and selected physiological parameter among patients admitted in ICUs in experimental group.

Table 7 shows that the mean post test anxiety score 25.37 is lower than the mean pretest anxiety score 35.7. The obtained 't' value was 19.328, which was significant at 0.05 level. This indicates that the difference between the means 10.33 was a true difference and had not occurred by chance. The difference between the two means was due to the effect of tactile stimulation.

Haricson, Berglund, Mattaa and. Sagesten (2006) conducted study on five nurses with a touch therapist training were interviewed about their experiences of preparation before giving tactile stimulation in an ICU. In the intervention study there were significantly lower levels of anxiety for patients. This study supporting the findings.

Table 8 shows that mean post test HR score 79.9 lower than the pre test HR score 81.18. The obtained 't' value was 9.48 which was significant at 0.05 level. This indicates, that the difference between the mean 1.28 occurred by the effect of tactile stimulation.

OBJECTIVE – IV

To find out the relationship between the post test anxiety level and selected physiological parameter among patients admitted in ICUs in experimental group.

It was found that post test anxiety score in experimental group value r=1 indicates perfect positive relationship is presented. It was found post physiological parameter HR score in experimental group value r=0.215 indicates moderately positive relationship is

presented. This findings are supported by Pauli, and Paul (1999) and Barr, C (1999) when you experience anxiety, your body is essentially in fight or flight mode an evolutionary adoption that prepares your body for danger. During the activation of this system, your body is flooded with adrenaline. This one of the most common reasons that people feel increased heart beats and it often occurs when someone is overly sensitive, stress / anxious. Dr. Mccann is psychiatrist and directs the anxiety disorders program, he explains the effect of anxiety on the heart is rapid heart rate and decreased heart rate variability and increased blood pressure.

OBJECTIVE – V

To seek association between the pre test anxiety level with selected demographic variables (age, sex, diagnosis, occupation, education, martial status, type of ICU & number of stay in ICU) of experimental & control group.

There was no association between pre test anxiety score in the experimental and control group and age, the obtained $\chi 2$ value of 0.0062 at df (1) was not significant at 0.05 level. It was also found no association between pre test anxiety score of subjects in experimental and control group with sex, the obtained $\chi 2$ value was 0.0062 at df (1) which was not significant at 0.05 level. With regard to education, there was no association between pre test anxiety score of subjects in both experimental group and control group, and the calculated $\chi 2$ value was 1.026 at df (3) which was not significant at 0.05 level. It was found that there was no association between marital status and pretest anxiety score of subjects in experimental and control group, the obtained $\chi 2$ value was 0.0026 at df (1) which was not significant at 0.05 level. Regarding the association

between the occupation and pretest anxiety score of subjects in both experimental and control group the obtained $\chi 2$ value was 0.788 at df (2) which was not significant at 0.05 level. Regarding the association between the diagnosis and pretest anxiety score of subjects in both experimental & control group, the obtained $\chi 2$ value was 1.07 at df (1) which was not significant at 0.05 level. There was a association between the type of ICUs and pretest anxiety score of subjects in both experimental and control group, the obtained $\chi 2$ value was 5.59 at df (2) which was significant at 0.05 level. It shows that there was no association between the pretest anxiety score in experimental and control group and the number of stay in ICU obtained $\chi 2$ value was 0.307 at df (2) which was not significant at 0.05 level. There was an association between pretest anxiety score and type of ICUs. So, the researcher was unable to reject the null hypothesis and hence partially accept the research hypothesis.

OBJECTIVE – VI

To find out the association between the pre test selected physiological parameter with selected demographic variables (age, sex, diagnosis, occupation, education, martial status, type of ICU & number of stay in ICU) of experimental & control group.

To find out if there was any association between the pretest level of selected physiological parameter (HR) of both experimental & control group with demographic variables (age, sex, education, occupation, marital status, diagnosis, type of ICUs and Number of stay in ICU). Table 15 shows that there was no association between (pre test physiological parameter HR score in both experimental & control group) and age the

obtained $\chi 2$ value was 0.661 at df (1) which was not significant at 0.05 level. It was also found that there was no association between (pre test physiological parameter HR score in both experimental & control group) and sex the obtained $\chi 2$ value was 0.296 at df (1) which was not significant at 0.05 level. Regarding the education and pretest physiological parameter HR score in both experimental & control group, the obtained value of value of $\chi 2$ 2.09 at df (3) which was not significant at 0.05 level. With regard to occupation and pretest physiological parameter HR score in both experimental & control group, the obtained value of $\chi 2$ 1.48 at df (2) which was not significant at 0.05 level. It was found that there was no association between the marital status and pretest physiological parameter HR score in both experimental & control group the obtained value of $\chi 2$ 1.667 at df (1) which was not significant at 0.05 level. There was a association between the diagnosis and pretest physiological parameter HR score of subjects in experimental and control group, the calculated value $\chi 2$ 5.59 at df (1) which was significant at 0.05 level. There was a association between the type of ICUs and pretest physiological parameter HR score of subjects in experimental and control group, the obtained score of $\chi 2$ 15.26 at df (2) which was significant at 0.05 level. With regarding of the number of stay in ICU and pretest physiological parameter HR score of subjects in experimental and control group, the obtained score of $\chi 2$ 1.757 at df (2) which was no significant at 0.05 level. In conclusion, there was no association between the pretest physiological parameter HR score of both experimental & control group (age, sex, education, occupation, marital status, diagnosis, type of ICUs and Number of stay in ICU). But, there was an association with, diagnosis and type of ICUs. Hence, the researcher was unable to reject the null hypothesis and partially accept the research hypothesis.

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study and the conclusions drown. It clarifies the limitations of the study, implications and recommendations given for different areas of nursing for the health care delivery system.

SUMMARY OF THE STUDY:

The purpose of the study is to assess the effectiveness of the stimulation on anxiety and selected physiological parameter (HR) among patients admitted in Intensive Care Units of Government Rajaji Hospital, Madurai.

THE OBJECTIVES OF THE STUDY:

- To find out the level of anxiety and selected physiological parameter before and after providing tactile stimulation among patients admitted in ICUs in experimental group
- To find out the pre-test and post-test level of anxiety and selected physiological parameter among patients admitted in ICUs in control group
- To evaluate the effectiveness of tactile stimulation on anxiety and selected physiological parameter among patients admitted in ICUs in experimental group.
- To find out the relationship between the post-test anxiety level and selected physiological parameter among patients admitted in ICUs in experimental group.

- To seek association between the pre-test anxiety level with selected demographic variables (age sex diagnosis occupation education marital status type of ICU and number of stay in ICU) of experimental and control group
- To find out the association between the pre-test selected physiological parameter with selected demographic variables (age sex diagnosis occupation education marital status type of ICU and number of stay in ICU) of experimental and control group.

THE FOLLOWING HYPOTHESIS WERE TESTED AT 0.05 LEVEL OF SIGNIFICANCE:

H1:

The mean post test level of anxiety of patient admitted in ICU who have received tactile stimulation will be significantly lower than their mean pre-test level of anxiety.

H2:

The mean post test level of selected physiological parameter of patient admitted in ICU who received tactile stimulation will be significantly lower than their mean pre-test level of selected physiological parameter.

H3:

The mean post test level of anxiety of patients admitted in ICUs in experimental group who have received tactile stimulation will be significantly lower than the mean post test level of anxiety score of the control group.

H4:

The mean post test level of selected physiological parameter of patients admitted in ICU of experimental group will be significantly lower than the mean post test level of selected physiological parameter of the control group.

H5:

There will be a significant positive relationship between the post test level of anxiety and selected physiological parameter of patients admitted in ICUs in experimental group who have received tactile stimulation.

H6:

There will be a significant association between the pre test level of anxiety among patient's admitted in ICUs with selected demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU) of experimental group and control group.

H7:

There will be a significant association between the pre test level of selected physiological parameter (HR) among patient's admitted in ICUs with demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU)of experimental group and control group.

Purposive sampling method was used to select the study subjects. A total of 60 subjects were selected in that, 30 samples assigned to experimental group and 30 were in control group. The tool used for this study was modified anxiety related part of the CINT questionnaire. Descriptive statistics and inferential statistics were used to analyze the data and to test hypothesis.

MAJOR FINDINGS OF THE STUDY:

DEMOGRAPHIC CHARACTERISTICS OF THE PATIENT:

Most of the subjects in the experimental group 9(30%) and in the control group 12 (40%) were between the age group of 31-40 years. Regarding sex, both in the experimental group 17 (56.66%) and in the control group 16 (53.34%) majority among them were males.

Regarding educational status most of the subjects in the experimental group 11 (36.66%) fell under primary education but in the control group 12 (40%) had their secondary education.

It was found that there were both coolie workers in the experimental group 13 (43.33%) and the control group 15 (50%).

Regarding marital status both in the experimental group and in the control group most of them were married. i.e, In the experimental group 24 (80%) and in the control group 23 (76.67%).

The above data shows that the subjects in the experimental group and in the control group were similar in demographic variables such as age, sex, occupation, marital status, except in education.

CLINICAL PROFILE OF THE SUBJECTS:

Regarding diagnosis of the samples that 22 (73.34%) in the experimental group and 23 (76.66%) in the control group were under surgical diagnosis.

It is noted in types of ICUs that most of the people in the experimental group15 (50%) were selected from SICU and in the control group 12 (40%) were selected from IMCU.

Regarding number of stay in the ICU, the most of the people in the experimental group 16 (53.33%) stayed between 1-3 days and the most of the people in the control group 15 (50%) stayed between 4-6 days.

CONCLUSION:

The following conclusions were drawn from the study.

- The mean post level of anxiety of patient admitted in ICU who received tactile stimulation was ($t = 19.328$; $P < 0.05$) which is as lower than their mean pre test level of anxiety.
- The mean post test level of selected physiological parameter of patient admitted in ICU who received tactile stimulation was ($t = 9.48$; $P < 0.05$) and was found to have significantly lower heart rate level when compared to pre test level of heart rate.
- The mean post test level of anxiety of experiment group was significantly lower than the mean post test level of anxiety of control group.
- There was not much difference in post test heart rate of experimental group subjects when compared to control group.
- There was a significant positive relation between the post test level of anxiety ($r=1$) and selected physiological parameter (HR) ($r = 0.215$) of experimental group who had received tactile stimulation.

- There were a significant association between the pre test level of anxiety and selected demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU) of experimental and control group that is type of ICUs. $\chi 2$ value was 5.59 at df (2) which was significant at 0.05 level.
- There was a significant association between the pre test level of selected physiological parameter (HR) with demographic variables (age, sex, diagnosis, occupation, education, marital status, type of ICU and number of stay in ICU) of experimental and control group that were diagnosis $\chi 2 = 5.59$ at df (1) and types of ICUs $\chi 2 = 15.26$ at df (2) was significant at 0.05 level.

IMPLICATIONS:

The findings of the study have application to the nursing field. The implication of the study could be discussed in four areas namely service, nursing educations, nursing administration and research.

IMPLICATIONS FOR NURSING PRACTICE:

- As members of the health care professionals one must equip themselves with adequate understanding of alternative medicine.
- Nurses are accountable in providing quality patient care. This can be done by the identification of personal experiences of the patients in ICU.
- ICU nurses must support patients on various domains (physical, psychological & environmental) to minimize the anxiety.

- Critical care staff can take measures to develop better ways to understand patient's experiences in ICU in order to reduce adverse effects of being a patient in an ICU.
- The findings of the study enlighten the fact that tactile stimulation can be used to reduce the anxiety.
- The study findings will help the nursing personnel to include tactile stimulation as a nursing intervention in the management of reducing anxiety at ICU settings.
- A protocol steps on implementation of the tactile stimulation can be used in all nursing care settings.

IMPLICATION FOR NURSING EDUCATION:

- Nursing curriculum should emphasize on critical care nursing and special needs and care of critically ill patient.
- Nursing students needs realistic preparation to work in the critical care environment and caring for critically ill patients.
- Nursing educators should encourage students to use various level of anxiety assessment scale while taking care of intensive care population.
- These findings would help nursing faculty to give importance for tactile stimulation as a nursing intervention in the management of reducing anxiety and motivate the nursing student to use this intervention in the ICU settings.
- This content should be added to the nursing curriculum so that the nursing students can come to known about tactile stimulation and its uses in reducing anxiety.

IMPLICATION FOR NURSING RESEARCH:

- There is a need for extensive and intensive research in the area.
- One of the aims of nursing research was to expand and broaden the scope of nursing. The findings of this study will provide base line data about the anxiety and selected physiological parameter and implication of tactile stimulation, it can be used for further studies in this area.
- This study also brings about he fact that more studies need to be done at different settings which was culturally acceptable.

IMPLICATIONS FOR NURSING ADMINISTRATION:

- Clinical nurse educator should be given in-service-education to update knowledge and monitoring of ICU anxiety among critical clients.
- Nurse's administrators can encourage the nursing personnel to conduct research on various aspects on interventions to reduce ICU anxiety.
- Nursing administrator should prepare guidelines and protocols regarding use of various assessment of ICU anxiety level.
- Periodic, conference, seminars, and symposium can be arranged for nursing personnel regarding care of patients in ICU.

LIMITATIONS:

The limitation of the study were,

- The sample size was 60 each finding should be generalized with caution
- Methodological limitation, the findings can be generalized only to the selected hospitals.

RECOMMENDATIONS:

- The similar kind of the study can be conducted for a larger group.
- A longitudinal study can be conducted to assess the effects of tactile stimulation on reducing anxiety.
- The same kind of study can be done in various ICU setting and among different age groups.
- The study can be conducted by using other intervention technique.
- This study can be done as comparative study in different settings.
- A qualitative study can be conducted among patients to describe their level anxiety in ICU.

SUMMARY:

This chapter had dealt with the summary of the study, conclusion, and implications for nursing field, limitation of the study and recommendations of future studies.

REFERENCES

- Adriano, Bonizzoli (2011). ***The role of the physical environment in the hospital of the 21st century***. 22(2). Retrieved from http://www.health design.org / research / reports / pdfs/role-physical_env.pdf.
- Almerud S, Alapark R J, Iridlund B & Ekebergh M (2007). Caught in an artificial splin; A phenomenological study of being a caregiver in the technologically intensive environment. ***Intensive and critical care nursing***. Doi: 10.1016/j.iccn.2007.08.003.
- Ashworth P (2003) Critical Care Nursing and Nurses. ***Intensive and Critical Care Nursing*** 16, 335-336.
- B.K. Maharajan. ***Methods in Biostatistics*** (for medical students and research workers). (2010). 7th edition, Jaypee Brothers New Delhi.
- B.T. Basavanthappa. (2009). 2nd edition, ***Medical Surgical Nursing***, Jaypee Brothers, New Delhi.
- Bala Subramanian (2012), "The non-experimental descriptive research design with cross sectional survey approach study. 37(5): 264-273, ***www.pubmed.com***
- Barbara Kozier (2011). ***Fundamentals of Nursing***, (7th ed.), New Delhi: Darling Kindersley publications.
- Barr, C. Ambulatory Heart Rate Changes in Patients with panic attacks AmJ. ***Psychiatry*** 143(4) (1999): 478-482.

- Basvanthappa, B.T. (2009). ***Nursing Research***. (2nd ed.). New Delhi: Jaypee Brothers Publications.
- Benner P (2004). Relational ethics of comfort, touch and solance – endangered arts, Am ***Critic care*** 13, 346-349.
- Bergbom. I (2007). Intensive and Critical Care Nursing, ***Intensive critical care nursing*** 23, 121-123.
- Black. M. Joyce & Hawks Jane Hokanson. (2008). ***Medical and Surgical Nursing***, (8th ed.), Missouri: Elseveir Publication.
- Bruce. H. Friedman and Julian. F. Thayer, (2009). ***Panic anxiety and heart rate variability*** retrieved from www.pubmed.com
- Brunner & Suddharth. (2008). ***Medical and Surgical Nursing***, (11th ed.). Philadelphia Lippincott Publications.
- Carol Cox & Julia Hayes (2000). Physiologic and Psychodynamic responses to the administration of therapeutic touch in critical care 15 (6); 363-368 ***retrieved from www.pubmed.com***
- Denise,F, Polit & Chery Patelo Beck. (2008). ***Nursing Research Generating and Assessing the Evidence for Nursing Practice,*** (8th ed.), Philadelphia: Wolter Klawer.
- Diane.M, Charles.E, Gessert and Colleen.M, Reneer (2009). Prospective study to examine the potential of massage to reduce agitation, 45(4); 318-310, ***retrieved from www.pubmed.com.***

- Dorothy, David. C, John & Rebecca. J., Micheal.G., Chris.R., Susana, Claire.F and Rosalind (2012). Prospective Cohort study of mixed diagnosis highest anxiety patients in a large general intensive care unit (ICU). 24(4). 556-563 abstract from ***www.intensivecritical care nursing.com***
- Dorrie.K and Fontaine (2008). Impart of the critical care environment on the patient 44 (6). 230-234. ***North England journal of medicine.***
- Field . T (2000). ***Touch therapy Churchill Livingstone***, Miami, USA.
- Flemming, K (2000). Review: Aromatherapy massage is associated with small, transsent reductions on anxiety, ***British medical journal*** 3(4), 118-120.
- Fontain, K (2005). Impact of the critical care environment on the patient. ***Retrieved from www.medic.94.com/morton*** 13: 36-48
- Fontaine, K., Briggs, L, and Pope Smith, B. (2001). Designing humanistic critical environments critical care nursing quarterly 243, 21-34.
- Friedrich, M (1999). The arts of healing, Journal of the ***American Medical Association,*** 281(19) 1719-1781.
- G.N. Prabhakaran. (2008). ***Biostatistics,*** First reprint, Jaypee Brothers, New Delhi.
- Gagne and Toye RC (1994), examine the two non-invasive procedures on experienced anxiety "chest", ***http://www.chestjournal.org***
- Garrido, N. Gongalez, A.M & Garria.G (2007). Stressful environmental events in the intensive care unit. Journal of enferm intensive 18 (4); 159, 67. ***Retrieved from www.ncbi.nlk.nih.gov.***

- Henricson M, Berglund, A.L, Matta. S and Segeten. K (2008). A transition from nurse to touch therapist. ***Intensive and critical care nursing,*** 22(4), 239-245.
- Henricson M, Segesten K, Berglund and A-L, Maata S. (2009). The outcome of tactile touch on stress parameters in ICU; ***Complementary therapies in clinical practice*** 24(2), 222-280.
- Hungler. B.P. & Polit. D.F. (2008). ***Nursing Research*** (8th ed.), Philadelphia: Lippincott Company.
- Ischiro Kowachi, Davi Sparrow, and Pantel. S Vokonas (2008). Prospective Cohort study on phobic anxiety is strong risk fact for coronary artery disease. ***Retrieved from www.googlescholar.com***
- Jane Stein Parbury (2007). Interpersonal skills in critical care nursing. ***www.world.cat.org.***
- JE Hupcey (2004). Feeling Safe: ***The Psychosocial Journal of Nursing Scholarship***. Needs of ICU, Volume 32. Issue 4. Pages 361-367.
- Julia, B. George. (1995). ***Nursing Theories,*** (4th ed.), Pearson education company.
- Kahn, D.M, Cook, T.E., Carlisle, C.C Nelson, D.L. Kramer, N.R. & Millman, R.P (2009). Identification and Modification of Environmental Noise in an ICU Setting Chest 114(2) 535-561. ***http://www.chestjournal.org***
- Karlsson V & Forsberg A (2008). Health is yearning – Experiences of being conscious during ventilator treatment in a critical care unit***.*** ***Intensive and critical care nursing*** 24, 41-50.

- Kathleen MC and Adams (2006). Quasi experimental study to examin the effect of healing touch on cardiovascular variables (HR, systolic blood pressure, diastolic blood pressure and MAP) in critically ill patients, 77(5); 556-562. ***www.intensivecriticalcarenursing.com***
- Kim Dolman (2009). ***Effect of complementary and alternative medicine.*** www.psychosomatic medicine.com; 42(6). PP: 559-570.
- Kozier & Eeb's (2011). ***Fundamentals of nursing; concepts, process and practice;*** 8th edition, Pearsons Education Publications, PP:425-426.
- Kramer. NR (2009). Prospective reported cohort study to quantify the levels of anxiety experienced by intensive care unit patients just before transfer to the ward and then twice after transfer to the ward; 29(5). 654-57, abstract from ***www.intensivecriticalcarenursing.com.***
- Kuruvilla. J, (2007). ***Essentials of critical care nursing,*** (1st edition). Jaypee Brothers Medical Publishers 33-35.
- Lewis. MS. Collier. & Heit Kemper. (2004). ***Medical and Surgical Nursing*** (6th ed.), Philadelphia: W.B.Saunders Publication.
- Linda.S.Thomas (2010). Parallel group randomized control trial to determine healing touch on anxiety. 44(5) 171-174. Abstract from ***www.pubmed.com***
- Lof L, Berggren L & Ahlstrom G (2006). Severely ill ICU Patients recall of factual events and unreal experiences of hospital admission and ICU stay. ***Intensive and Critical Care Nursing*** 22, 154-166.

- M.Krucoff, S. Crater, C, Green, A. Mass, J. Seskevich, J.Lane, K. Leoffler., K.Morris, T. Bashore and H.Koening. The mantra study: The measurement and actualization of noetic training (tactile touch, prayer, meditation & education). 2497); 217-219.***www.intensivecriticalcarenursing.com***
- Magnus and Turkington (2009). The lived experience of tracheostomy while acutely ill; 23(2); ***Retrieved from www.elsevier.com/iccn.***
- Maria Adela and Silva (2008). The effect of relaxation (healing touch) touch on the recovery level of post anesthesia abdominal hysterectomy patients 19(4); 526-527, ***www.pubmed.com***
- Maria Henricsonab. Kerstin Segestena, Anna- Lena Berglundle & Sylvia MaaHaa (2009). Enjoying tactile touch and gaining hope when being cared for in intensive care and phenomenological hermenutical study, ***http://www.google.com.trunkatingword: tactile touch.***
- Marrie Cook (2009). ***Complementary and alternative medicine and critical care nurses.*** A survey of knowledge and practices in Australia. www.intensive critical care nursing.com
- Mazer (2002). Imapct of ICU Environment. Worth England Journal of Medicine. 342(4). ***Retrieved from www.criticalcaremedicine.com***
- Morion and Mitchell (2009). CAM in ICU settings. Chest 142(5):532-533 ***Retrieved from http://www.Chestjournal.org.***
- Nightingale, F. (1970) ***Notes on Nursing*** United Kingdom: Brandon / systenes press.

- Nishi Aggarwal. (2010). ***Essentials of Bio statistics,*** 1st edition, Peepee publishers, New Delhi.
- Olson.M and Sneed N (1999). Effectiveness of therapeutic touch in reducing anxiety. ***Advanced practice nursing*** 16(2); 97-108. www.aacn.org
- Paulette Sansone & Lovire Schmitt (2000). Providing tender touch massage to elderly nursing home residents; A demonstration project 21(6); 303-308, abstract from ***http://www.pubmed.com***
- Pauli and Paul. (1999) Anxiety induced by cardiac perceptions in patients with panic attacks; ***A field study. Behaviour research and therapy***, 29.2: 137-145.
- Petterson. M (2000). Reduced noise levels in ICU promote rest and healing. ***Critical care nurse***, 20(5), 104.
- Potter, A, Patricia. & Perry Anne Griffin. (2006). ***Fundamentals of Nursing*** (6th ed.). Missouri: Mosby publications.
- Renee Rabert L, Dianee Long, and Meliss L.Autchinson (2008). Creating a Healing Environment in the ICU. ***www.jblearuing.com***
- Smeltzer, S.C & Bara, B. (2005). ***Text book of medical and surgical nursing***, (10th ed.), Philadelphia: Lippincott Company.
- Stayt, L.C (2002). Nurses, experiences of caring for families with relatives in intensive care units. ***Journal of Advanced nursing***, 57(6): 623-30.
- Stichler, J (2001) creating healing environments in critical care units; **Critical care nursing quarterly** 24(3); 1-20.
- Suresh.K.Sharma. (2012). I edition, ***Nursing Research & Statistics.*** Elsevier Science, India Ltd, New Delhi.

- Szokol JW and Vender JS (2007). ***Anxiety, delirium and pain in the ICUs***. North Western University School of Medicine, Chicago, USA. ***Szokol@nwu.edu***
- Vincent M. Drescher, MA, W. Horsley Gantt MD, and William E, Whitehead, (2009). ***Heart rate response to touch, psychosomatic medicine*****;** 48(6). ***Retrieved from www.pubmed.com***
- Wahlin I, EK A-C & Idvall E (2006). Patient empowerment in intensive care – An interview study. ***Intensive and critical care nursing,*** 22; 370-377.
- Wigforss Percy A (2006). ***Massage och halsa.*** (Swedish) student literature land.
- Wikipedia, (2007) Decibel, http://sv.wikipedia.org/wiki/decibel (Accessed 12/20 2007).
- Wikstrom A, Cederborg A-C, Johanson. M, Wikstrom.S, Gunnarsson.T and Nordin C (2007). Tactile stimulus and neuro hormonal response; a pilot study. ***International Journal of Neuroscience,*** 113, 787-793.
- Wilkin, K., & Slevin, E. (2004). The meaning of caring to nurses: an investigation into the nature of caring work in an intensive care unit. Journal of clinical nursing, 13 (1): 50-9. ***Retrieved from htpp://www.ncbi.nlm.nih.gov/pubmed/***
- Zahazare, Hooman Shansavari and Morini (2008). Effects of therapeutic touch on vital signs of patients before coronary artery bypass graft surgery, June 8 (3);184-189.***www.intensivecriticalcarenursing.com***

WEBSITES:

- www.aacn.org
- www.google.com
- www.healthsource.caremark
- www.intensivecriticalcarenursing.com
- www.pubmed.com
- www.wikipedia.com
- www.ncbi.nlm.nih.gov
- www.jblearing.com
- www.mesothelioma.com/treatment/alternative/healing-andtherapeutictouch therapy.html
- http://www.chestjournal.org
- Szokol@nwu.edu
- www.googlescholar.com
- http://www.health design.org / research / reports / pdfs/role-physical_env.pdf.
- www.who.org

APPENDIX – I

COPY OF LETTER SEEKING PERMISSION

TO CONDUCT THE STUDY IN SELECTED AREAS IN MADURAI DISTRICT.

Dr. NALINI JEYAVANTH SANTHA
Principal.

4/235, COLLEGE ROAD
THASILDAR NAGAR
MADURAI – 625 020
PHONE: 2534593

Ref. UT: SHNC: 2012

Date:

To

Respected Sir / Madam,

Sub: Sacred Heart Nursing College, Madurai – Project work of M. Sc (Nursing) student – permission requested – reg.

We wish to state that Mrs. Porjia Jansi Rani, R, II year M. Sc (Nursing) student of our college has to conduct a Research project, which is to be submitted to The Tamilnadu Dr. M.G.R. Medical University, Chennai in partial fulfillment of University requirements.

The topic of research project is "A study to assess the effectiveness of the tactile stimulation on anxiety and selected physiological parameter (HR) among patients admitted in Intensive Care Units of Government Rajaji Hospital Madurai"

.

We therefore request you to kindly permit her to do the research work in your organization under your valuable guidance and suggestions.

Thanking you,

Yours faithfully,

Principal
SACRED HEART NURSING COLLEGE
ULTRA TRUST, MADURAI – 20.

APPENDIX – II

LETTER REQUESTING OPINONS AND SUGGESTIONS OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY AND VALIDITY OF TOOL

From

R. Porjia Jansi Rani,
IInd Year M.Sc (Nursing),
Sacred Heart College of Nursing,
Madurai – 20.

To,

Respected Sir / Madam,

SUB : Requesting opinions and suggestion of experts for the content validity and validity of tool.

I am a post graduate student (Medical Surgical Nursing Speciality) of Sacred Heart Nursing College. I have selected the below mentioned topic of the research project submitted to DR. M.G.R. Medical University, Chennai as a fulfillment of Master of Science in Nursing.

TITLE OF THE TOPIC:

"A study to assess the effectiveness of the tactile stimulation on anxiety and selected physiological parameter (HR) among patients admitted in Intensive Care Units of Government Rajaji Hospital Madurai"

With regard to this may I kindly request you to validate my content and tool for its relevancy. I am enclosing the objectives of the study. I would be highly obliged and remain thankful if you could validate and send it as early as possible.

Thanking You.

Place: Your's faithfully,
Date:

(Porjia Jansi Rani. R)

APPENDIX - III

List of Experts Consulted for the content validity of research tools

1. Dr. Ramakrishnan, B.Sc., MB., DNB (Surgery), Mch. (ctvs).,
   Cardio Thoracic ICU (CTICU),
   Vijaya Hospitals,
   Vadapalani, Chennai.
2. Mrs. Nalini Jeyavanth Shantha, M. Sc (N), Ph.D.,
   Principal,
   Sacred Heart Nursing College,
   Madurai.
3. Mrs. Devakirubai, M. Sc (N), Ph. D.,
   Professor,
   Sacred Heart Nursing College,
   Madurai.
4. Mrs. Manjula, M.Sc (N), Ph.D.,
   Professor,
   Sacred Heart Nursing College,
   Madurai.
5. Dr. Micheal. J. Leo, M.Sc., M.Phil (Maths), Ph.D.,
   Associate Professor, Statistician,
   St. Xaviours College of Education,
   Palayamkottai, Thirunelveli.

APPENDIX – IV

TOOL – 1

A. DEMOGRAPHIC VARIABLE

BIOGRAPHIC PROFILE

Age :

Sex :

Education :

Occupation :

Marital status :

CLINICAL PROFILE

Diagnosis :

Type of ICUs :

Number of days stayed in ICUs :

TOOL - 2

B. TOOL FOR ASSESSING ANXIETY AMONG ICU PATIENTS

Content During your ICU stay. How often did you feel	Pre Test				Post Test			
	Some times 1	Often 2	Very often 3	Always 4	Some times 1	Often 2	Very often 3	Always 4
Loneliness								
Fear of sever suffering								
Fear of handicap								
Fear of future								
Dress used in ICU								
Strain								
Panic								
Death related fear								
Melancholy								
Lack of orientation								
Anger								
Optimism*	4	3	2	1	4	3	2	1
Uncertainty								
Confidence*	4	3	2	1	4	3	2	1
Uncomfortable sound and smell								
Scoring								

Interpretation:

1. 1 – 15 : Normal
2. 16 – 30 : Mild anxiety
3. 31 – 45 : Moderate anxiety
4. 4. 46 – 60 : Severe anxiety

TOOL - 2

TOOL FOR ASSESSING ANXIETY AMONG ICU PATIENTS

eP;fs;mtrufhy rpfpr;irg; gphptpy; mDkjpf;fggl;Lss; nghJ. fPH;tUk;ve;j mstpw;F clgLtPf;fs?	Pre Test				Post Test			
	kpfr rpy neu';fspy; 1	rpy neu';fspy; 2	mof;fo 3	vgbghGJk; 4	kpfr rpy neu';fspy; 1	rpy neu';fspy; 2	mof;fo 3	vgbghGJk; 4
jdpikggLj;jg;gl;l czh;t[								
mjpfntj idggl ntz;paUf;Fnkh vdw gak;								
cWgg[fis ,Hgnghnkh- clw;F iwghL VwgLnkh vdw gak;								
vjph;fhyj;ijf;Fwpj;j gak;								
kdrnrhh;t[- Cf;fkpHe;j epiy								
jPtpu rpfpr;irg;gphptpy; gadgLj;jggLk; rPuPilfs;								
bgUkgak;- nguR;rk;								
kuzj;ijf;Fwpj;j gak;								
Jaukhd kdepiy								
R{Hpepiyfs;Fwpj;j tpHgg[zh;t[f;F iwt[								
nfhgk;								
ekgpf;if a[ld;Toa – jsuhj kdepiy *	4	3	2	1	4	3	2	1

e|r;rakw;w j d;i k - e|i y								
neh;k i wahd v z ;z k; nknyh ';f|a k d e|i y*	4	3	2	1	4	3	2	1
t r j|i a f;F i w f;Fk; r j;j ';f S k; t hr i d f S k;								

t|s f;fk;

1. 1 – 15 : tHf;fkhd
2. 16 – 30 : nyrhd
3. 31 – 45 : k|j khd
4. 4. 46 – 60 : f L i kahd

TOOL – 3

C. ASSESSMENT OF PHYSIOLOGICAL PARAMETER (HR)

	PRE TEST						POST TEST					
	1	3	5	7	9	11	2	4	6	8	10	12
APICAL HEART RATE PER MINUTE												

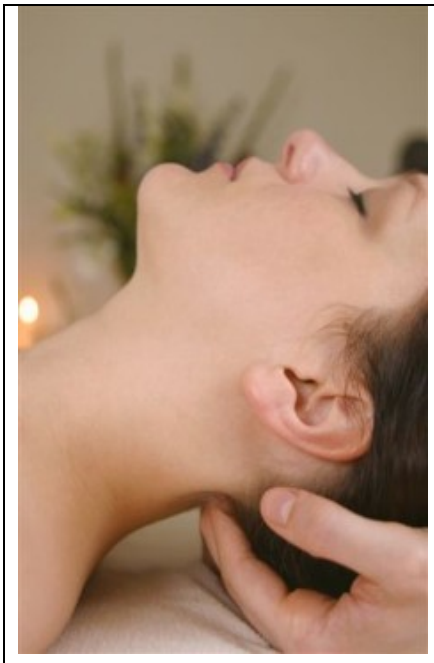
NORMAL HEART RATE : 70-100 beats per minute

APPENDIX - V

INTEVENTION PROTOCOL

PROCEDURE WHILE DOING TACTILE STIMULATION

STEPS	RATIONALE
Wash hands	Reduces transmission of micro organisms
Adjust bed to height comfortable position and lower side rails if any	Ensure proper body mechanisms and prevents strain on nurses back muscle
Place client in comfortable position(supine)	Enhances relaxation and exposes area to be stimulated
Drape the client, Expose only the area where tactile stimulation is to be applied	To enhance the privacy
Ask the patient to close the eyes and concentrate on each body part to relax one by one starting from head to toe	Gains the patient attention and cooperation
TACTILE STIMULATION TO HEAD AND SHOULDER Relax the scalp using slow gentle stroking and touch all over the head, over and over again. The procedure will be begun from the base of the skull the four pressure points(point 1: at centre on border of occipital, point 2:an inch from point 1 to left side, point 3:an inch from point 2, point 4:an inch from point 1 to right side) in the base will be given pressure with the help of the finger tips (little finger, ring finger, middle finger, index finger- 4 fingers at a time)for about 2minutes	Reduces the anxiety level

 **Moving towards the forehead to crown point** The four fingers tips will be used to give pressure from the forehead point towards the crown point. At the crown point, Tip of the index finger will be used to give a pressure for one minute. **Moving sidewise,** Four fingers tips of hand will be used to give gentle pressure, the fingers will be moved sidewise and then for the whole head for giving pressure about 4 minutes(a gentle effleurage with palms of hand will be given at the end) **Towards fore head** The pituitary points of fore head will be given pressure with the help of finger tip of index finger at similar time on both the sides for 2 minutes.	Increases the circulation and has effect on heart rate

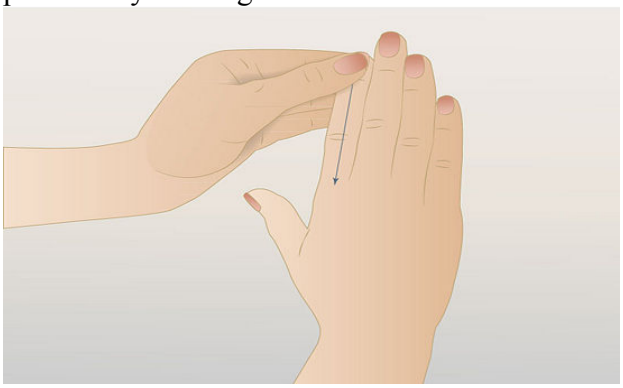
Next to pineal point
The pineal point of fore head will be given pressure with the help of finger tip of index finger for 1 minute

And then to thyroid point
The thyroid point will be given pressure with the help of five fingers tips for one minute.

Hold the head from the back with the help of both the hands and gently swift the head in rotation motion of left to right

Provide a gentle touch with the palm and finger pad of the hand on fore head and base of the scalp at the same time.

Gently touch the shoulder for a minute by standing at the back of the patient.

TACTILE STIMULATION TO HAND  Hold the hand in order that the meridian of the heart region in hand will be pressurized by finger pads of the investigators hands. The little finger will be given a pressure along for one minute and the proximal aspect of the palm meridian will be given a pressure for one minute. Each finger tips of the patient will be given gentle pressure by investigator.  Same procedure be will be repeated to the other hand	Reduces the heart rate and enhances the circulation
TACTILE STIMULATION TO FOOT 	Enhances the circulation and maintains the heart rate.

The finger tips of the thumb of both the hands will be used to give pressure to the heart meridian of the sole, at the same time other four fingers of each hand will be giving pressure to the other lateral aspect of the foot. Then, the hallux will be given pressure with the finger tips of the thumb in a circular motion, the same procedure will be followed to other 4 toes, in between of each toes a single finger tip will be used to give pressure.  Then, the whole sole of the foot will be given pressure in a zigzag manner in order that every pressure points will be given pressure for five minutes. 	

 Same procedure will be done to other foot also	
Effleurage will be given to body part after completion of tactile stimulation.	Enhance the relaxation
At the end of the procedure, the patient will be instructed to open his/her eyes and relax	

APPENDIX – VI

COPY OF CERTIFICATE IN TACTILE STIMULATION

THE VALLIAMMAL INSTITUTION (TVI)

11/6 B.B. Road 2nd St., Pankajam Colony , Madurai-625 009.

98430 40226; 98942 49630 email: ananthibetsy@rediffmail.com

Certificate Course in Basic Counselling Skills and Tactile Stimulation

Reg. No. PCC/31/June 2013/229 Date: 17/06/2013

This is to certify that PORJIA JANSI RANI. R *has completed our* **CERTIFICATE COURSE IN BASIC COUNSELLING SKILLS AND TACTILE STIMULATION** *(24 hrs Part-time Education Programme designed and offered by experts) by effectively participating in theory & practical classes and successfully completing all the exercises. She has been placed in First Class*

THE VALLIAMMAL INSTITUTION (TVI) 11/6 B.B. Road 2nd St., Pankajam Colony , Madurai-625 009 Ph: 2312206

Prof. Dr. S. Jeyapragasam M.Sc.,M.A.,M.A.,Ph.D.,
Director
Rajarajan Institute of Science (RISE)

Dr. B. Ananthavalli M.Sc.,M.A.,M.Phil.,Ph.D.,
Director & Secretary
The Valliammal Institution (TVI)